FIRE ENGINEERING

OHIO STATE UNIVERSITY
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The Journal of the Fire Protection Profession Since 1877

MAY, 1946

Million Dollar Allentown, Pa., Fire at Its Height (See Description Elsewhere in This Issue).

A CASE - SHEPPERD - MANN PUBLICATION

FURTHER PROOF OF THE VALUE OF RESUSCITATORS

DURING the past several years many medical papers have carried articles showing the resuscitator to be the most effective apparatus yet made for the saving of human life from asphyxia due to smoke, shock or drowning.

EMERSON has been a pioneer and has consistently urged the use of this modern apparatus by fire departments, until today hundreds of fire departments are equipped with this always ready and reliable means of saving life. Practically every department that owns one or more EMERSON resuscitators has made excellent use of them—and has credit for saving many lives.

BE PREPARED with an EMERSON

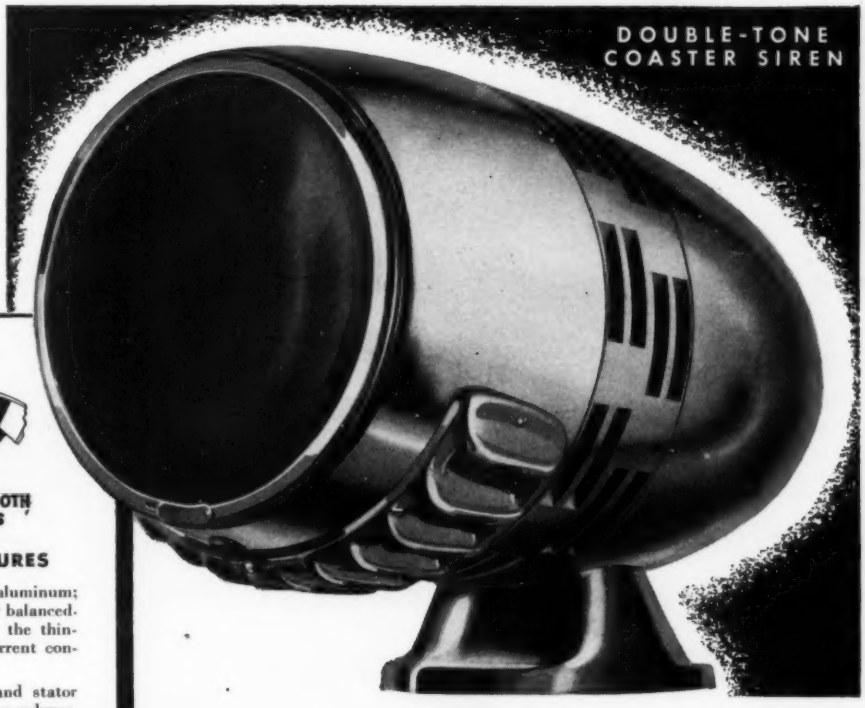
Write for literature, reprints or a demonstration.

J. H. EMERSON COMPANY

Representatives in Principal Cities

22 COTTAGE PARK AVENUE • CAMBRIDGE, MASS.

How POWER is built into this FEDERAL VEHICLE COASTER SIREN



FEDERAL SIREN FEATURES

Rotor: die-cast zinc alloy or cast aluminum; precision machined and individually balanced. Large air volume slips easily past the thin-smooth rotor blades; minimum current consumption.

Ports: knife-edge ports in rotor and stator assure sharp, true pitch, tremendous volume. Accurately spaced, carefully machined for tone quality, clearness, and power. Number of ports balanced with motor speed for high efficiency.

Coaster Brake: stops roll, and sound, instantly; operated by separate button on dash. This is actual electric solenoid brake on the rotor; no harmful reversing of motor.

Motor: heavy duty, long life; low friction bronze or ball bearings; 6 to 12 volt models.

Flashing Red Light: other models with oscillating red light driven by separate motor; no external parts to freeze or jam; swings horizontally; no wasteful up-and-down motion.

FEDERAL Coaster Siren

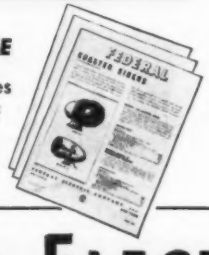
Federal sirens have a tremendously powerful tone that demands attention, clears the way. This model has a clear-cut distinctive double tone; and coasts almost two minutes after current is off.

This is a true coaster type. Special clutch mechanism releases the rotor, allowing it to coast much longer than so-called "long-roll" types, which seldom roll over 30 seconds. Siren can be stopped instantly with the electric brake, which is available if desired.

A wide choice of Federal sirens is available—with oscillating or flashing lights; single or double tone; special brackets available for roof or fender mounting. All are durably built and precision-machined for long service and powerful clear-the-way tone. For fire, police, ambulance, general alarm, and industrial use. Write for illustrated bulletin on types you need.

Get this Bulletin FREE

Details, illustrations and prices on this and other types of Federal sirens. *Write today.*



FEDERAL ELECTRIC COMPANY, INC.

SIREN HEADQUARTERS

8702 SOUTH STATE STREET, CHICAGO 19, ILLINOIS

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

In Pace With Progress!

IN this issue of FIRE ENGINEERING you will find an interesting article on *"Visual Education for Fire Service Training."*

It is by Fire Chief C. N. Penn, of the Dallas, Texas, Fire Department, whose illuminating text needs no ballyhoo. It speaks for itself.

● It is the progressive thinking of a progressive fire officer—the sort of manuscript from the sort of fireman the fire service needs and must have if it is to keep pace with post-war progress!

● Chief Penn seems to feel that FIRE ENGINEERING is the progressive "vehicle" for his brain-children. In his accompanying letter, he says, in part:

● "I have read FIRE ENGINEERING for years and have received much valuable information. You are to be congratulated for your good work in helping to raise the standards of the fire service. . . . We receive thirty-six (36) copies of FIRE ENGINEERING in this department each month. A copy is sent each fire station and to each of the several divisions and bureaus."

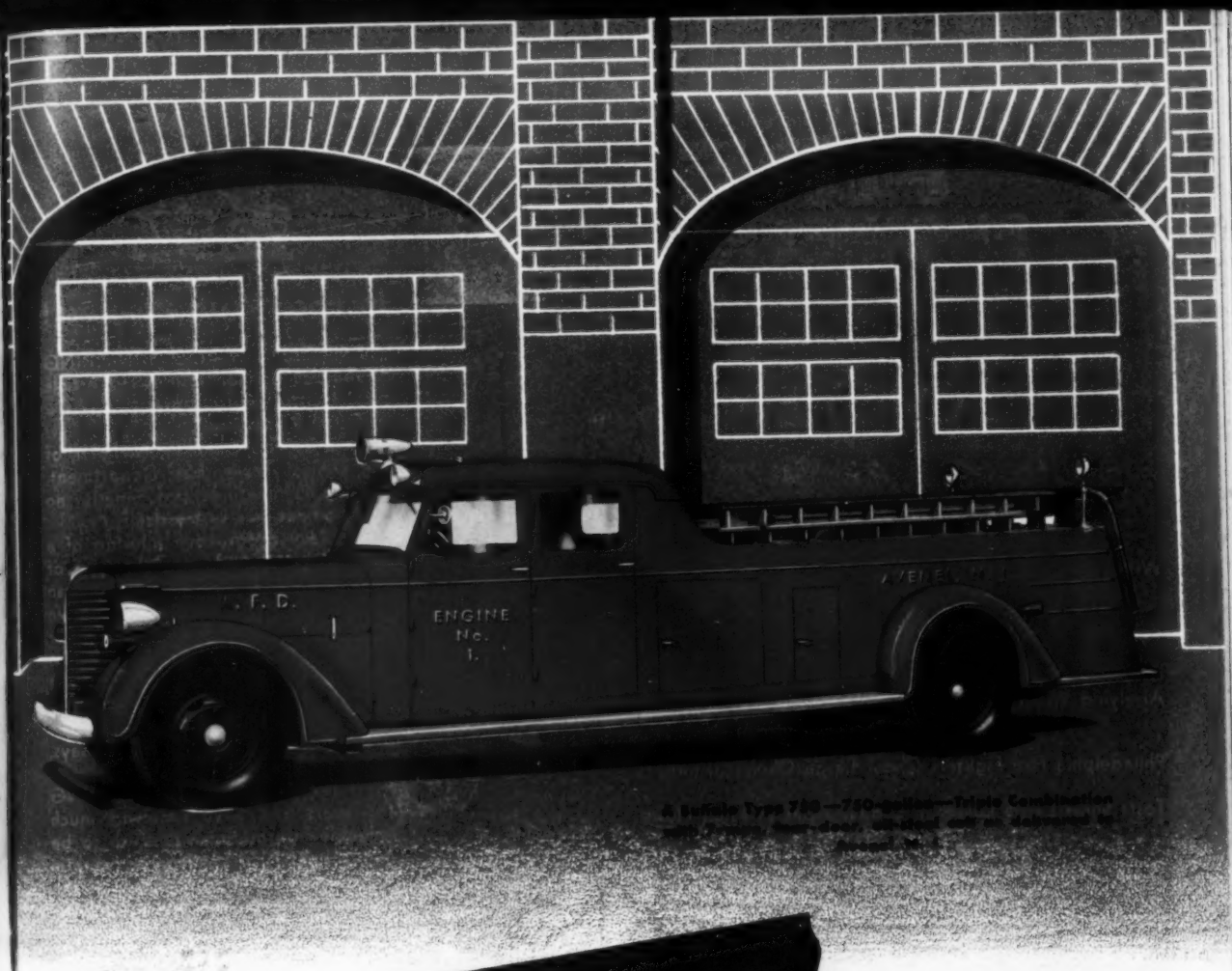
● We welcome Chief Penn as a new contributor to FIRE ENGINEERING. So will you when you've digested his message.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $2.50 a year; Foreign, $3.50; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1946, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

A CASE-SHEPPERD-MANN PUBLICATION
"Specialized Leadership"



A Buffalo Type 760—750-gallon—Triple Combination with 2-section, open-cab, all-steel body on Advance-Design Model [illegible] Chassis

BUFFALO better-built MOTOR FIRE APPARATUS

BUFFALO FIRE APPLIANCE CORPORATION

M & T BUILDING BUFFALO 2 NEW YORK

LA FRANCE

FAMOUS FEATURES

- Full powered 6 cylinder engines designed specifically for fire fighting apparatus assure dependable pump performance under all conditions. There is no "paper horsepower" in a WARD LaFRANCE.
- Exceptional maneuverability gained by special front axle construction. Variable rear axle ratios to suit local performance requirements — speed for level country; climbing ability for hilly country.

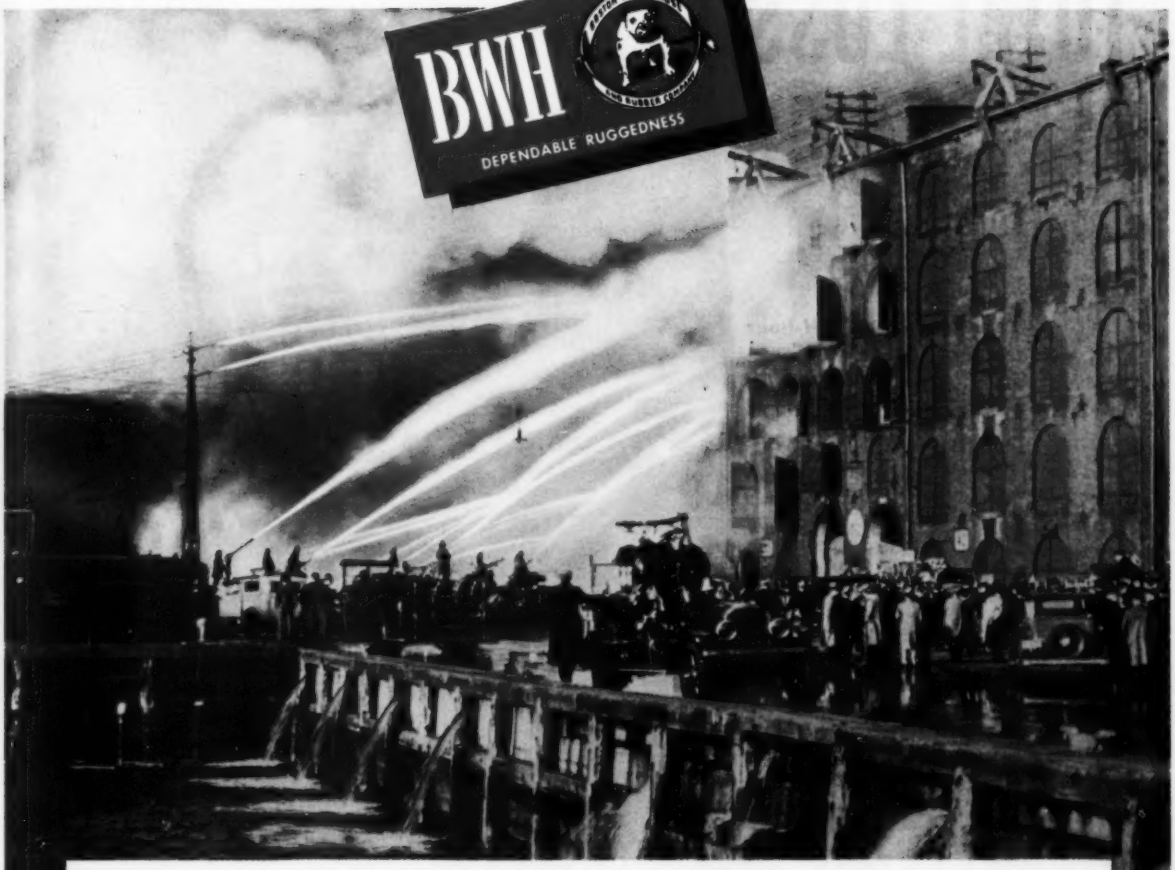
A fire service is no stronger than its most depreciated piece of apparatus. What is the status of your equipment? Modern fire fighting calls for trucks with stamina —engineered to meet the most severe test of your community's local conditions. The new Ward LaFrance Triple Combination Pumper should be considered *now* for replacement of your war-worn or outmoded equipment.

The best plan for cutting fire losses in your community is the purchase of adequate fire-fighting apparatus. Write Ward LaFrance today for their experienced recommendations on a pumper for your specific needs.

Ask for illustrated bulletins.

WARD LAFRANCE TRUCK DIVISION
Great American Industries, Inc.
ELMIRA, NEW YORK

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*



BWH FIRE HOSE DOES THE JOB!

High pressures are required to throw tons of water where it is needed. And high pressures require sturdy, dependable hose.

That's why so many cities insist on BWH FIRE HOSE. Rugged yet flexible and compact, its tight-woven jacket is permanently sealed to the handmade tube, assuring perfect adhesion . . . dependable performance.

Of equally fine quality are the nozzles, couplings, and other brass fittings manufactured by BWH in their modern foundry.

It will pay you to buy BWH FIRE HOSE, made by the originators of modern fire hose.

BOSTON WOVEN HOSE & RUBBER COMPANY

Agents in All Principal Cities

WORKS: CAMBRIDGE, MASS., U. S. A. • P. O. BOX 1071, BOSTON 3, MASS.

TOTAL LOSS AVERTED BY WaterFOG

Bad rural Class A Fire with half-hour start extinguished by two Rockwood SG-40 Nozzles in 20 minutes . . . with only 50 psi nozzle pressure.

Fire in the home of Harold E. Morgan, Wilbraham, Mass., started in upper bedroom. Firemen made first entry by ladder through second-floor window facing camera.

SG-40, the triple-action nozzle — discharges high-velocity WaterFOG, low-velocity WaterFOG from extension applicator, or straight stream. Approved by Underwriters' Laboratories, Inc. and Associated Factory Mutuals. Write for Bulletin C-501.

If the Wilbraham, Mass. Fire Department, headed by Chief Ralph E. Tupper, needed proof that Rockwood WaterFOG was effective on Class A Fires, they got it on February 11, 1946.

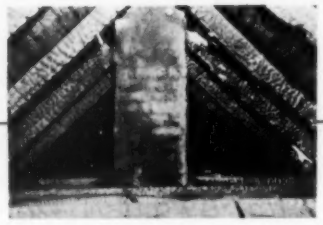
Arriving at this rural home after a delayed call and a slow run over icy roads, they found the upper section well involved, the fire having about a half-hour headway. The owner had resigned himself to a total loss.

With two ¾-inch booster lines equipped with ¾-inch SG-40 Rockwood WaterFOG Nozzles, they checked the fire in 8 minutes . . . completely extinguished the fire in 20 minutes. Source of water was apparatus tanks and a nearby well. The 110 psi at the pump was reduced to 50 psi at the nozzles by the friction of the 200-foot lines.

Chief Tupper's conclusion was that only the cellar hole of this five-room home would have been left if they had been obliged to use straight streams with such a limited supply of water. The owner, a carpenter, was amazed at the slight fire and water damage.

More and more fire departments and industrial plants are adding WaterFOG to their straight-stream facilities. The extra value which the Rockwood SG-40 Nozzle gives you is that it supplies both . . . because the control handle changes it from WaterFOG to Straight Stream instantly.

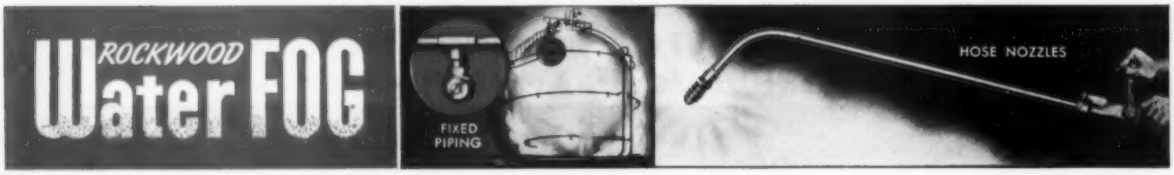
Write for Bulletin 123 describing how WaterFOG puts out fires faster, protects men and equipment, reduces water damage. Natural-color movies (16 mm.) also available. ROCKWOOD SPRINKLER COMPANY, 54 Harlow Street, Worcester 5, Massachusetts. *Specialists in Fire Protection Engineering, Equipment and Installation since 1907.*



View in attic shows deep charring indicating extent to which fire had gained headway before application of WaterFOG.

View of one end of living room showing very little fire or water damage below the second floor.

Water Engineered by Rockwood Cools, Confines, Smothers Class A and Oil Fires



Outstanding Performance at 5000 FEET!

The Crest Forest Fire Department, in California's San Bernardino Mountains, recently added this Mack Type 45 Pumper to its force at Crestline Village. The road and pump "ability" of this Mack, *at as high as 5,000 feet*, has won enthusiastic praise from the department and the commissioners.

Special problems are encountered in fighting blazes at high altitudes. "Thin" atmospheric pressure effects a decrease in engine horsepower and less actual pump pressure is the result.

It's the *added reserve* of Mack horsepower that means better-than-average performance in the mountains . . . and for that matter, *at any level, on any roads, in any climate!*

Mack horsepower is conservatively rated on a continuous duty basis. That means Mack horsepower lives longer, stays up to rating even under long-period, continuous operating conditions. You get all the power you order . . . *all the power you need* . . . with a Mack!

MACK MANUFACTURING CORPORATION
Fire Engine Department
Empire State Building, New York 1, N. Y.

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

Mack
FIRE APPARATUS

Performance Counts!

It will help if you will mention FIRE ENGINEERING *when writing advertisers*

DEPENDABILITY

In and Out

OF ACTION

Republic Fire Hose

FIRE HOSE designed and constructed with a wide margin of extra serviceability to handle all requirements . . . hose that keeps its properties of wear and pressure resistance over extended periods—that is the complete degree of dependability of Republic Fire Hose. Further, protection against mildew, rot and vermin is available by specifying Republic's exclusive Provar Process. Capacity to stand up under all conditions of intended use also is found in Chemical Hose by Republic. Consult your local Republic Distributor.

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REPUBLIC RUBBER

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REPUBLIC INDUSTRIAL PRODUCTS
YOUNGSTOWN, O

LEE DELUXE TIRES AND TUBES
CONSHOHOCKEN, PA.

DEARBORN Repeats

"The E & J Resuscitator has proven to be such an efficient piece of equipment—that we have just recently purchased our second unit."
Elwood J. Nowka
Deputy Chief, Fire Dept.
Dearborn, Mich.

with the E & J RESUSCITATOR INHALATOR and ASPIRATOR

On March 15, 1945, the Dearborn, Mich. Fire Department purchased their first E & J Resuscitator with two micro attachments for handling more than one patient at a time.

This was a most fortunate purchase for on Nov. 6 of that year, 28 employees of the Chrysler Corp. were overcome by carbon monoxide gas poisoning. As Deputy Chief Nowka reports: "The micro attachments proved to be a wonderful asset for they made it possible for us to work on three patients simultaneously with the one E & J resuscitator. Of course this was a tremendous advantage due to the large number of patients to be revived. This experience is only one of many in the past year where the Dearborn Fire Department has used the E & J Resuscitator with astounding results."

Wherever you go, the country over, you'll find E & J giving such outstanding performance. Can your community afford to be without this protection?

For further information, write to any of our distributors listed below.

E & J MANUFACTURING CO., GLENDALE, CALIF.

Drexel Bldg. Philadelphia — 17 East 42nd St. New York City — 530 Fernando St. Pittsburgh — 3700 Grandy Ave. Detroit, Mich. — 481 Raytheon St. Boston — 2100 So. Springfield Ave. Chicago — 3032 W. 25th Ave., Denver, Colorado — 5005 Euclid Ave., Cleveland, Ohio

Pioneers and Specialists in Mechanical Artificial Respiration

A·D·T PERFORMANCE 1945

BURGLAR AND HOLDUP ALARM SERVICES

Attacks on A. D. T. Protection *(An increase of about 50% over 1944)*	1528
Entrances effected	798
Captures as result of burglar alarms	509
Captures as result of holdup alarms *(An increase of 260% over 1944)*	54
Ratio of losses in attacks on A. D. T. Protection to insurable values protected	1/100th of 1%
Immunity from burglary loss	99 99/100ths %

WATCHMAN'S REPORTING AND MANUAL FIRE ALARM SERVICE

Investigations of failures of watchmen to signal Central Station on schedule	241,842
Total number of signals recorded	324,893,005
Watchmen's patrol efficiency	99 93/100ths %
Fire alarms from manual boxes	1,645
Insurable values of properties protected	$15,166,367,000
Ratio of fire losses to insurable values protected	3/100ths of 1%
Fire loss immunity in 1945	99 97/100ths %
Average fire loss immunity during the past ten years	99 97/100ths %

SPRINKLER SUPERVISORY AND WATERFLOW ALARM SERVICE

Supervisory alarms, indicating impairment of sprinkler systems	139,303
Waterflow alarms, indicating fires or serious leaks	2,749
Insurable values of properties protected	$7,149,469,000
Ratio of fire and water losses to insurable values protected	2/100ths of 1%
Fire loss immunity in 1945	99 98/100ths %
Average fire loss immunity during the past ten years	99 98/100ths %

Another Year of Outstanding Accomplishment

Under present conditions of acute shortages and the difficulties of replacing destroyed property, it is most important for every businessman to consider the extent and value of his protection facilities.

These cold, hard statistics are convincing proof of the remarkable effectiveness of A. D. T. Central Station Protection Services in minimizing fire and burglary losses.

The high ratio of immunity from fire and burglary losses enjoyed by A. D. T. subscribers is available in all of the principal municipalities throughout the United States. We will gladly send you booklets describing A. D. T. Services.

•

Controlled Companies of **AMERICAN DISTRICT TELEGRAPH CO.** *155 Sixth Ave., New York 13, N. Y.*

CENTRAL STATIONS IN ALL PRINCIPAL CITIES OF THE UNITED STATES

A·D·T

Electric Protection Services

AGAINST FIRE · BURGLARY · HOLDUP

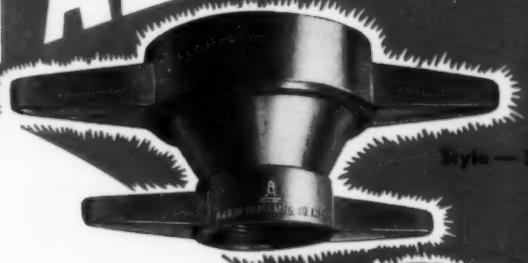
A NATION-WIDE ORGANIZATION

Style — 335

Style — 336

Style — 337

AKRON ADAPTERS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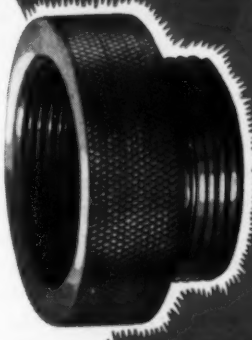
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FIREMAN FREDDIE SAYS: ADAPT *yourselves to Akron efficiency equipment — if at fire fighting you wish to become more proficient!*

YOU can eliminate the chance of serious delays in making hose connections by having Akron Adapters, including Hydrant and Suction Hose Connections, in your equipment. The Adapters provide combinations of thread sizes from 3/4" to 2-1/2" — the Hydrant and Suction Hose Connections from 2-1/2" to 6". Other sizes made on special order. Either Rocker Lugs or Pin Lugs available on Adapters. Hydrant Connections furnished with long handles or lugs only, or a combination of the two. Roller bearing swiveling feature assures free action. Write for complete information.

AKRON BRASS MFG. COMPANY, INC.
WOOSTER, OHIO

AKRON BRASS
FIRE FIGHTING EQUIPMENT

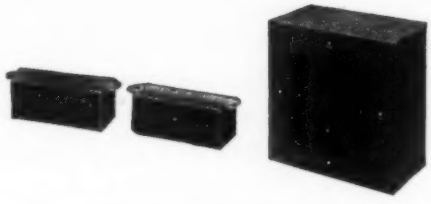
KAAR INSTANT HEATING MOBILE FM

Now available! An FM Radiotelephone with a truly NATURAL voice quality!

New KAAR FM radiotelephones offer an improvement in tone quality which is suprising to anyone who has had previous experience with mobile FM equipment. The over-all audio frequency response through the KAAR transmitter and receiver is actually within plus or minus 5 decibels from 200 to 3500 cycles! (See graph below.) This results in vastly better voice quality, and greatly improved intelligibility. In fact, there is appreciable improvement even when the FM-39X receiver or one of the KAAR FM transmitters is employed in a composite installation.

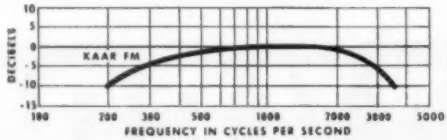
KAAR FM transmitters are equipped with instant-heating tubes, thus making it practical to operate these 50 and 100 watt units from the standard 6 volt ignition battery without changing the generator. Inasmuch as standby current is zero, in typical emergency service the KAAR FM-50X (50 watts) uses only 4% of the battery current required for conventional 30 watt transmitters. Battery drain for the KAAR FM-100X (100 watts) is comparably low.

For full information on new KAAR FM radiotelephones, write today for Bulletin No. 24A-46.



KAAR LOUD SPEAKER, remote controls for transmitter and receiver (illustrated above) and the famous Type 4-C push-to-talk microphone are among the accessories furnished with the equipment.

IMPROVED OVER-ALL FREQUENCY RESPONSE THROUGH KAAR FM TRANSMITTER AND RECEIVER



KAAR ENGINEERING CO.
PALO ALTO • CALIFORNIA

KAAR ENGINEERING CO

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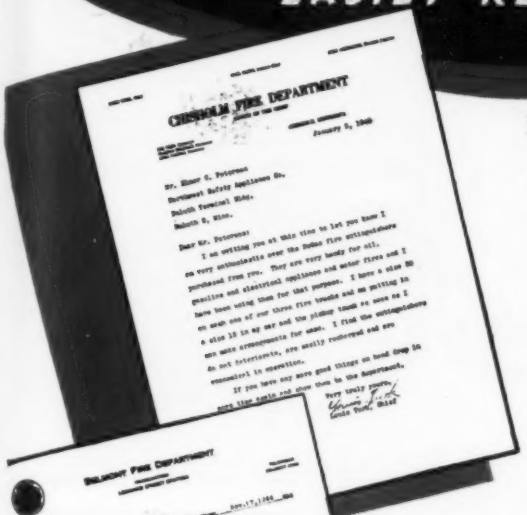
THE FIRE-STOPPING SPEED OF ANSUL-DUGAS DRY CHEMICAL EARNS ENTHUSIASTIC PRAISE FROM MEN WHO FIGHT FIRES

"EFFECTIVE..ECONOMICAL.."
"MINIMIZES THE DAMAGE.."
"DOES NOT DETERIORATE.."
"EASILY RECHARGED...."



CHISHOLM FIRE DEPARTMENT

January 5, 1946

Mr. Elmer C. Peterson
Northwest Safety Appliances Co.
Duluth Terminal Bldg.
Duluth 9, Minn.

Dear Mr. Peterson:

I am writing you at this time to let you know I am very enthusiastic over the Dubo fire extinguishers purchased from you. They are very handy for oil, gasoline and electrical appliance and motor fires and I have been using them for that purpose. I have a size 30 on each one of our three fire trucks and am putting an extra 10 in my car and the pickup truck we have as I am more acquainted to use. I find the extinguishers are easily recharged, are easily removed and are in good interiority.

If you have any more good things on hand drop in to see us sometime.

Very truly yours,

Chief

RALSTON FIRE DEPARTMENT

Ansul Chemical Company
Marinette, Wis.

Attention Mr. R. C. McGrath, Sales Mgr.

Dear Sirs:

Your letter of September 19 received and contents noted. I would be very happy to allow you to use the pictures of our apparatus with you ad if it is agreeable to Dubo Equipment.

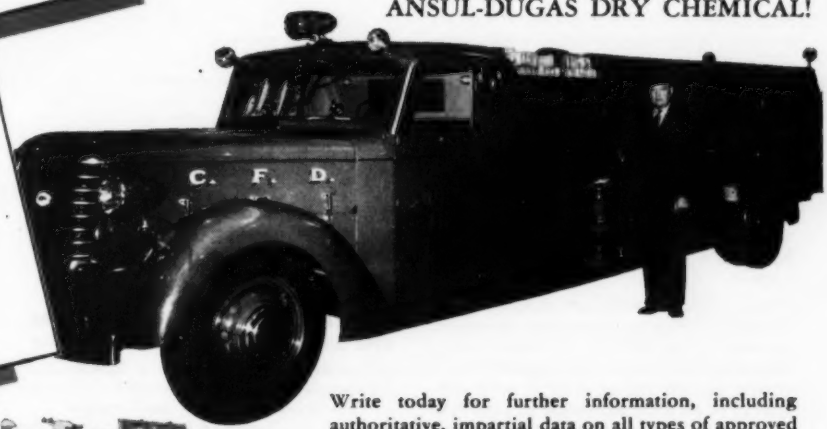
In this Dubo equipment is carried on all fire apparatus and after many experiments and it was decided every one extinguishers I have used it was efficient in all cases where it was used. It is efficient in...

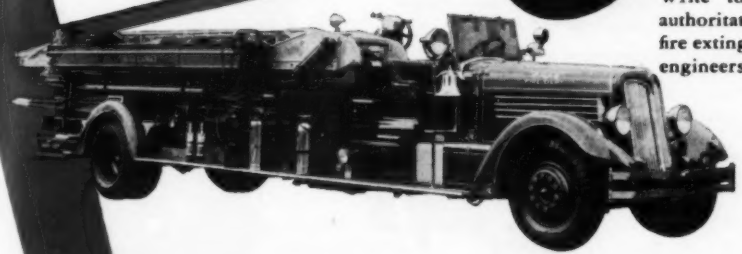
I am now equipping all fire apparatus with the Dubo Cumulsers to be used in conjunction with the extinguishers and covered.

Very truly yours,

Chief of Department

wmk





Fire chiefs voice their praise of the swift, fire-stopping power of ANSUL-DUGAS Dry Chemical. Time after time, the ever ready reliability of an ANSUL-DUGAS Fire Extinguisher has helped them prevent thousands of dollars in property damage and production losses. Such solid sentiment in favor of quick-acting ANSUL-DUGAS Dry Chemical, by men whose job is fighting fire, is a valuable tip to buyers of fire protection. STOP FIRE FASTER WITH ANSUL-DUGAS DRY CHEMICAL!

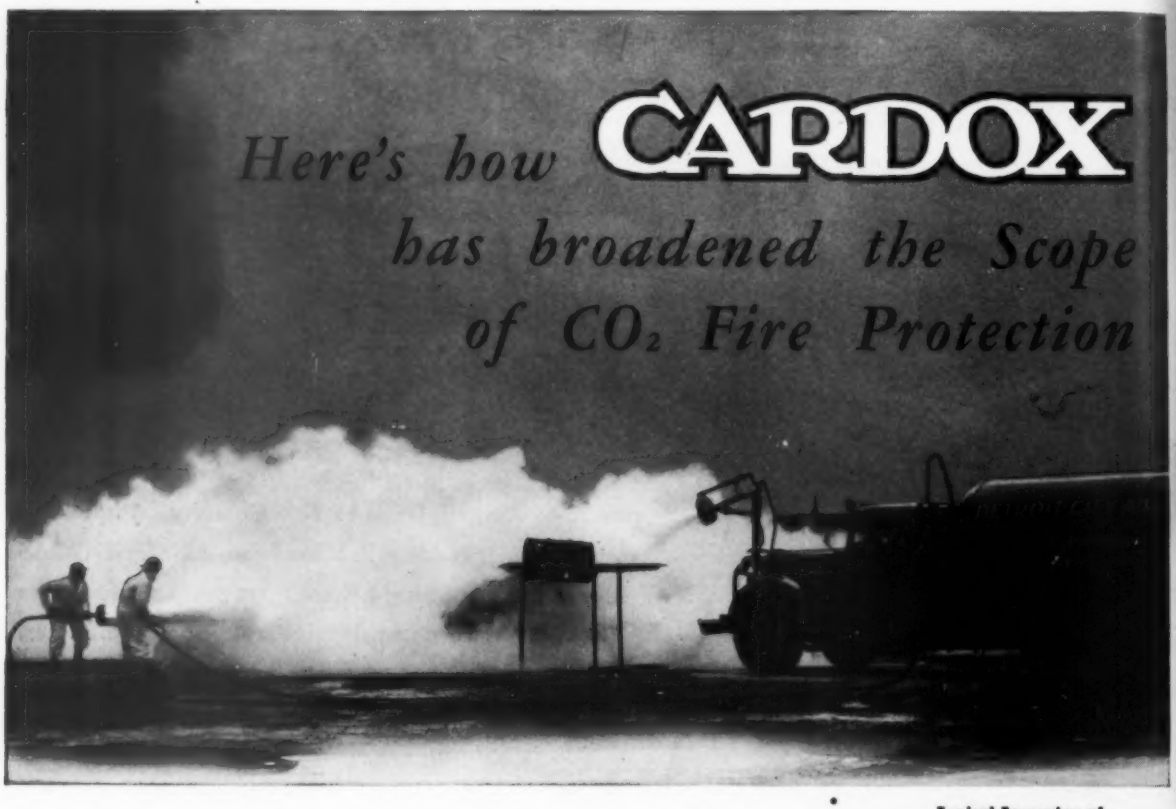
Write today for further information, including authoritative, impartial data on all types of approved fire extinguishers. The ANSUL staff of fire protection engineers is ready to serve you.

AN ANSUL PRODUCT
dugas
THE MASTER OF FLAME

Listed and approved by Underwriters' Laboratories and Factory Mutual Laboratories.

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*



Airport crash fires are among the most vicious of all fires to fight. Army and Navy experience proved that they call for equipment able to reach any part of the field quickly . . . *with enough of the right extinguishing medium to deal effectively with the largest fires likely to be encountered.*

The ability of the Cardox Airport Fire Truck to overwhelm vicious crash fires fast, is one of many examples of the broadened scope of CO_2 fire protection made possible by Cardox methods of application and control.

These methods, which are utilized in all Cardox Fire Fighting Equipment, are made possible by the distinctive Cardox system of control and engineered application of carbon dioxide stored at 0° F. and relatively low pressure in a single storage unit containing from ¼ ton to 125 tons. As a result, enough of this dry inert, non-damaging gas is made available to handle even large fires and leave an ample reserve for new emergencies.

As a result of these unique Cardox developments, low pressure liquid carbon dioxide can be applied with equal facility in *pounds* or *tons* . . . making it entirely practical, for example, to use this fast-acting extinguishing medium: (1) To protect banks of large transformers outdoors, (2) To provide *tons* of Cardox CO_2 on a high speed truck to guard widely scattered hazards, (3) To provide a *single system* capable of protecting multiple hazards throughout large plants, (4) To equip factories, hangars, etc. with a *portable unit* with sufficient capacity to deal with relatively large fires *when seconds pay dividends!*

Write today for details on how Cardox's broadened application of carbon dioxide can best be utilized to increase the protection of your specific operation. Ask for Bulletin 1956.

CARDOX CORPORATION
BELL BUILDING • CHICAGO 1, ILLINOIS

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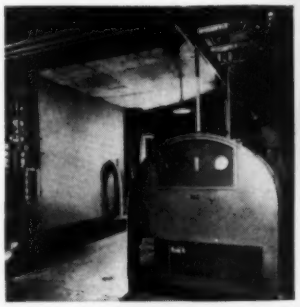
Typical Examples of Cardox Fire Fighting Equipment

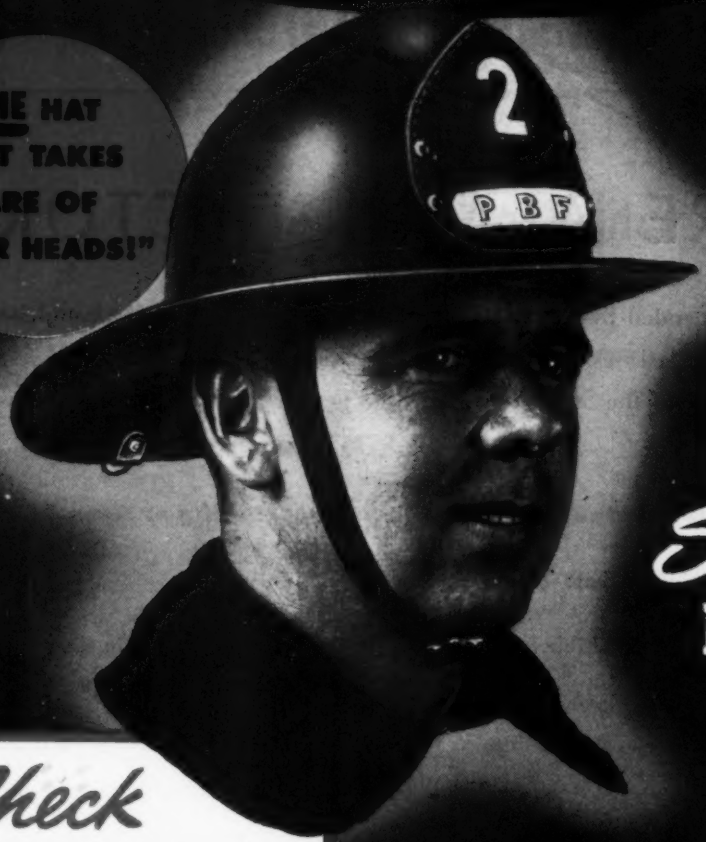


(1) Cardox Fixed Systems. Provide 500 pounds to 125 tons of liquid carbon dioxide.
(2) Cardox Fire Trucks. Tons of CO_2 on wheels for application through hose line or standpipe systems.
(3) Cardox Airport Fire Truck. Uses mass attack to overwhelm vicious crash fires fast.
(4) Cardox Transitank. Portable unit with a capacity of 750 pounds of carbon dioxide. Now available in certain parts of the country in hand propelled, and motorized models.

CARDOX
CO_2 FIRE EXTINGUISHING SYSTEMS

FOR MODERN PROTECTION AND APPEARANCE...

"THE HAT THAT TAKES CARE OF THEIR HEADS!"



M·S·A
Streamlined FIREMAN'S HELMET

Check these Features!

- √ One-piece, high pressure molded of laminated bakelite
- √ Tremendous resistance to fracture
- √ Best protection against electric shock
- √ Can't soften, swell or gain in weight
- √ Reinforcing crown ridge
- √ Self-ventilated, cool and comfortable

Soft leather sweatband
—adjustable crown hammock
—sturdy chinstrap!

Better head protection and easy wearing comfort ride with the fireman on every run—stay with him on the job, and serve him every minute—when he wears the M.S.A. Streamlined Fireman's Helmet! This most popular modern helmet's correct proportions and streamlined design deflect the force of blows and bumps, keep hot water and embers from face and neck, add smartness on parade. Heat and moisture cannot soften or deteriorate the highly fracture-resistant shell . . . write for the facts in Bulletin DX-5!

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The FIRE ALARM FACTOR

The Standards recommended by the National Fire Protection Association comprise the generally accepted yardstick for measuring the adequacy of the municipal fire defenses. Section 206-10 of the Standards relative to proper fire alarm box distribution is quoted below.

"Boxes shall be located so as to suitably protect the city or town."

"Note: In general it is considered that:

- A box should be plainly visible from the main entrance of any building in congested districts.
- In mercantile or manufacturing districts it should not be necessary to traverse more than one block *nor more than 300 feet to reach a box.*
- In closely built residential districts this distance should not exceed *one block or 500 feet.*
- In other residential districts this distance should not exceed 3 blocks or 1000 feet along or toward the main artery of travel."

Less adequate box distribution entails delayed alarms and excessive fire losses. YOU, *as a citizen, have a right to urge the municipal authorities to provide adequately for the public safety.*

Protect LIFE—HOME—BUSINESS and INCOME

Install A FIRE ALARM BOX AT EVERY FIRE HAZARD

Write for our latest booklet entitled "It Can Happen Here"

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

In Canada: Northern Electric Company, Limited, Montreal

MAY, 1946

FIRE ENGINEERING

VOL. 99, NO. 5

With the Editor

Revise Life Loss Figures Upward! Disturbing information is just disclosed to the editors of this publication, in the form of mortality data, by the National Board of Fire Underwriters.

For many years the Board has set the figures of loss of life from fire in this country at an average of 10,000 annually. Now it is reported that the annual total is nearer 11,000.

This, coupled with the seemingly inexorable upward swing of property losses resulting from fire, cannot but give everyone in and connected with the fire service of this nation food for thought.

The problem is still more disturbing when it is realized that these growing losses are continuing in the face of what has undoubtedly been the most energetic and costly educational promotion of fire prevention in the history of this country.

Here is a condition which should inspire all hands to exert extra effort in their peacetime battle with fire. This tragic upswing in loss of life should be convincing proof that this is no time for penurious politicians to advocate misapplied economies in dealing with fire protection and prevention budgets. If the fire service is ever to win this grueling struggle, it will be only because it is armed with all the trained personnel and most modern, fire fighting equipment and fire prevention laws that it requires.

The I. A. F. C. Conference At this moment, all signs point to a record-breaking conference of the International Association of Fire Chiefs at Cleveland, Ohio, on July 23-26. Unusual interest is being shown in the exhibit feature of the conference by fire apparatus and equipment manufacturers, and applications for space are coming in at a surprising rate.

An unusually strong technical program has already been laid out, featuring many timely topics which have never before been discussed at an annual meeting of the organization. Fire fighting developments since Pearl Harbor, hazards of new industrial products and new fire extinguishing mediums are but a few of the subjects included.

The local committee, under Chief James Granger, is hard at work arranging details for the gathering, and good progress is being made.

The only item which causes any apprehension is that of hotel accommodations. Rooms, even at this early date, are becoming hard to get. It is urged that early reservation be made by members planning to be on hand. A list of the leading hotels in Cleveland is given elsewhere in this issue.

Fred Shepperd

Volunteers and Paid Force Control $1,000,000 Fire

Worst Fire in 20 Years at Allentown, Pa., Brought Under Control After Eight-Hour Fight; Asst. Chief Dies

A STAFF REPORT*

REGARDED as the worst fire in twenty years, a blaze of potential conflagration proportions in Allentown, Pa., on April 10, cost the life of Assistant Chief Marcus Good, injured several other firemen, routed scores of persons from living and working quarters and did estimated damage of over $1,000,000.

The city's fire-fighting, police and disaster forces were mobilized for the eight-hour blaze that several times threatened to spread over a quarter of a city block in the heart of the downtown area.

The fire centered in the Rialto Theatre Building, a brick and frame structure of three stories, which fronts on Hamilton street and extends through the block about 125 feet to narrow Trexler Court. The building occupies the site of the old Lyceum theatre, destroyed by fire in 1916. It was erected in two stages, from 1918 to 1921, at a reported cost of $750,000 and, at the time of the fire, held eight storerooms, twenty apartments, a recreation center with basement bowling alleys and the Rialto theatre, which, it is said, had just received improvements costing $15,000.

East of the Rialto building is the 5-story Keystone Furniture building, the four upper floors of which are occupied by the Adelphi Shirt Co., manufacturers of undergarments. Adjoining the Keystone building on the east is the Medical Arts Building. To the west of the Rialto building is a narrow "L" shaped store of the "taxpayer" type occupied by a bakery and adjoining this at the corner of Hamilton and Tenth street is an old converted dwelling occupied on the ground floor by a cigar and a candy store and upstairs, by apartments.

The Rialto Building was broken up into a number of stores all but one of those on the first floor being occupied. The entrance to the theatre adjoined the Keystone building, continuing toward Trexler Court where it formed a right angle with the auditorium. It was at (see accompanying diagram) approximately this point that Chief Good met his death and several other firemen had narrow escapes.

Running the full width, under all five sections of the structure including the theatre lobby, was the Recreation Center, with its bowling alleys. In ad-

*The editors are indebted to Chief Clarence Marcks, Allentown, for much data used in this article.

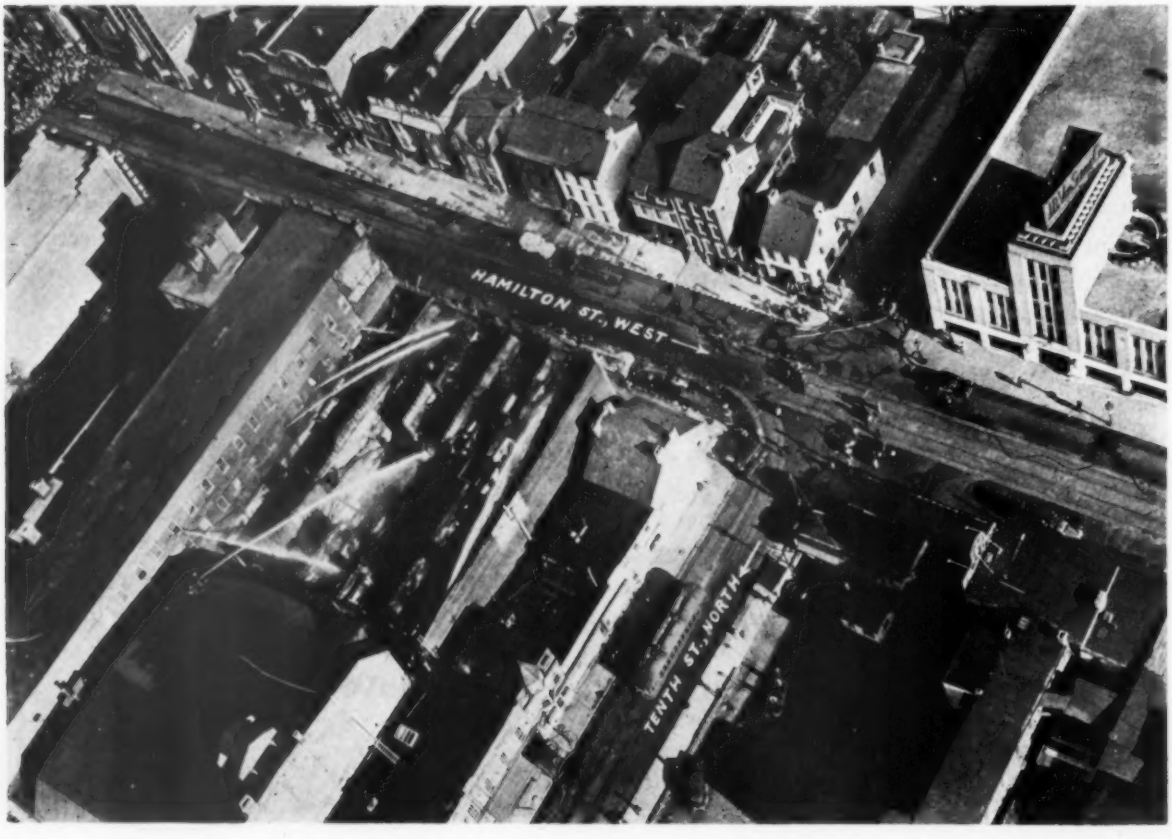


Photo Courtesy Allentown Fire Department

After the Allentown, Pa., Fire Had Been Extinguished

This air view shows the fire area clearly. Fire was stopped at the long building at left. This structure also served as a point of vantage for operating on the blaze.

Photo Courtesy Allentown Fire Department

Firemen Fight Allentown Fire from Flank

Firemen successfully prevented spread of flames to theatre auditorium (rear) and structures on Tenth Street. Fire envelops roof areas.

dition there were storerooms, and a boiler room. It was this basement condition which contributed to the lateral spread of the fire.

Destroyed were the restaurant (tap room), electrical appliance shop, recreation center, beauty parlor, photograph studio, jewelry store (vacant), novelty shop and some second-floor offices. The furniture store, shirt company, bakery, cigar store and candy shop suffered damages ranging from minor to severe.

Origin in Doubt

The fire was the second of general alarm proportions to break out in Allentown within two weeks. It is believed to have started in the boiler room at the rear of the Rialto Recreation parlor's bowling center, although there is evidence to suggest its origin in a storage closet.

Pinboys reported smelling smoke at midnight, just before the alleys closed. They investigated but found no traces of fire, it is said. Tenants of the building also detected smoke at about 4:30 A.M., but it was not until nearly 9:00 A.M. that two building employes discovered the fire almost simultaneously. One found smoke in the theatre lobby and ran to the basement where he discovered the boiler room in flames; the other employe first saw smoke coming from the storage closet where paint and building maintenance material was kept. Another witness, a window cleaner, reported he saw wires burning at the rear of the restaurant which occupies one of the storerooms adjoining the theatre. The burning wires were also noted by a plumber, engaged in renovating part of the structure.

The first alarm was received by the fire department from Box 134 at Tenth and Hamilton at 8:55 A.M., and a general alarm was sounded a few minutes later, bringing a large part of the city's fire forces to the scene.

Heavy Smoke Encountered

Upon the arrival of the district companies on the first alarm, dense smoke was encountered in the lower part of the structure and some tenants of the upper floors were seen at windows, evidently seeking escape. There was a brisk wind blowing eastward, and southeastward. No flames were immediately visible in the front of the building although firemen endeavoring to gain entrance into the basement were met by a heavy body of fire.

Despite the use of masks, firemen were unable to reach the heart of the fire from the Hamilton street side, although openings were made in the ground floors and streams directed into the burning basement.

Lines were taken into narrow Trexler Court, from the Tenth street side, and the fire attacked from the rear. It was in this Court. that firemen took heavy punishment in their effort to remove tenants of the upper floors and to operate streams in order to prevent extension of the fire into the main theatre auditorium.

Despite the tons of water thrown into the building's lower levels, shortly after 11:00 A.M. the flames broke through the roof and great clouds of smoke billowed out to engulf buildings to leeward. Firemen were at once ordered off the roof by Fire Chief Clarence Marcks, in charge of fire fighting operations. Ladder pipes and deluge sets, augmented by hand lines, were then placed so as to surround the fire, some of the heavy streams being directed from the roof over the stage of the theatre and from windows of the adjoining Keystone building.

At one time, fire communicated to the window ledges of the latter structure but firemen were able to prevent its extension to the fourth and fifth floors. Water damage, however was considerable to the stocks of the furniture and shirt companies where, according to observers, the premises "were soaked by an automatic sprinkler system which sprayed water during most of the blaze."

At 1:40 P.M., the floors and roof of the western end of the Rialto Building collapsed, and streams were directed into the burning interior. It was not until 3:00 P.M. that fire fighters considered the fire under control. The 'release' was sounded at 5:00 P.M., although companies remained at the scene throughout the night.

Theories for Spread of Fire

Theories for the spread of the fire in its initial stages were advanced by the proprietor of the Recreation Center, who pointed to the fact that ventilation for the large basement recreation area was provided through a 100-foot duct which ran the width of the bowling alleys on the north side of the wrecked building. This duct measured 36-inches wide by about 18-inches depth and a 36-inch fan operated by a ¼-h.p. motor moved the air through five large grids opening out of the duct. When fire broke through the boiler room into the bowling alleys, this furnished a veritable chimney 100 feet in length for the heat and flames. A closet (previously referred to) in the bowling alley section is said to have contained approximately 15 gallons of lacquer, about 16 gallons of volatile plastic for bowling alleys, five gallons of lacquer thinner and some 70 new sets of bowling pins to furnish flammables for the flames.

Shortly before 4:00, spectators were

Photo Courtesy Allentown Fire Department

Fire Working Through Rialto Building, Allentown, Pa.

Starting in basement, stubborn fire extended through building. Shortly after this photograph was taken firemen were driven from roof. Assistant Chief Marcus Good lost his life here.

moved further back from the immediate fire area when it was feared the west wall of the Rialto Building would collapse. At one phase of the fire, City Councilman and former Fire Chief Wolf informed Mayor Diefenderfer that it might be necessary to resort to dynamiting to prevent the spread of the flames beyond the Keystone Building. However, firemen, who remained in the structure during the fire operating four streams from the upper reaches of that structure onto the Rialto Building were able to stop the spread at that point.

Calls for help greeted the first firemen to reach the scene. These came from tenants on the upper floor, some at windows, still in their nightclothes. One woman was seen struggling to open a window in the smoke. Other tenants, many of whom did not wait to gather belongings, were making their way down the main and rear stairways.

Firemen quickly laddered the building and removed all those who remained. With Penn Power & Light Company volunteers, they rescued a 23-year-old blind girl from the roof of a building on Tenth street adjoining the burning structure. Many tenants, lost in the smoke, were assisted through the halls and down the stairs or ladders by firemen.

The number of homeless tenants, 58 in all—most of whom lost all their belongings—added to the city's already acute housing problem. Bowling team members, chosen by 17 leagues to represent them in the American Bowling Congress tournament at Buffalo in April, lost all their gear.

Chief Good Killed

Assistant Chief Marcus Good died of "suffocation and superficial burns" during the early hours of the fire after he and two volunteer firemen were plunged into the scorching, smoke-filled, pitch-black basement when the theatre lobby floor caved-in.

Allen Musselman, a volunteer fireman, scrambled to safety by climbing up along the smouldering lobby carpeting which nine men had been trying to rip from the floor. His brother, Wilmer Musselman, also a volunteer fireman, was hauled aloft by a rope which was lowered by men who had been tossed backward when the floor dropped and the carpeting yanked from the floor. Allen and his brother escaped with severe burns. The former said that he and others had started pulling up the heavy carpet when the section where he, his brother and Chief Good were working "just gave way and it was like dropping in an elevator."

When Allen, desperately hanging to the carpet, shinnied up along its edge, he grasped the hot flooring supports and shouted: "There are two others down there. Get them!" Earl Weaver, fire patrolman got a rope and lowered it and, according to Wilmer Musselman, he and Chief Good reached for it. Good let Musselman go first. The rope was dropped to Good but he was unable to reach it at first in the dark. A box battery flashlight taped to the line, was lowered and those above felt a tug. They started to pull and then the rope snapped and Good pitched back into the darkness. He was still clutching the hook of the rope when he was later carried from the pit.

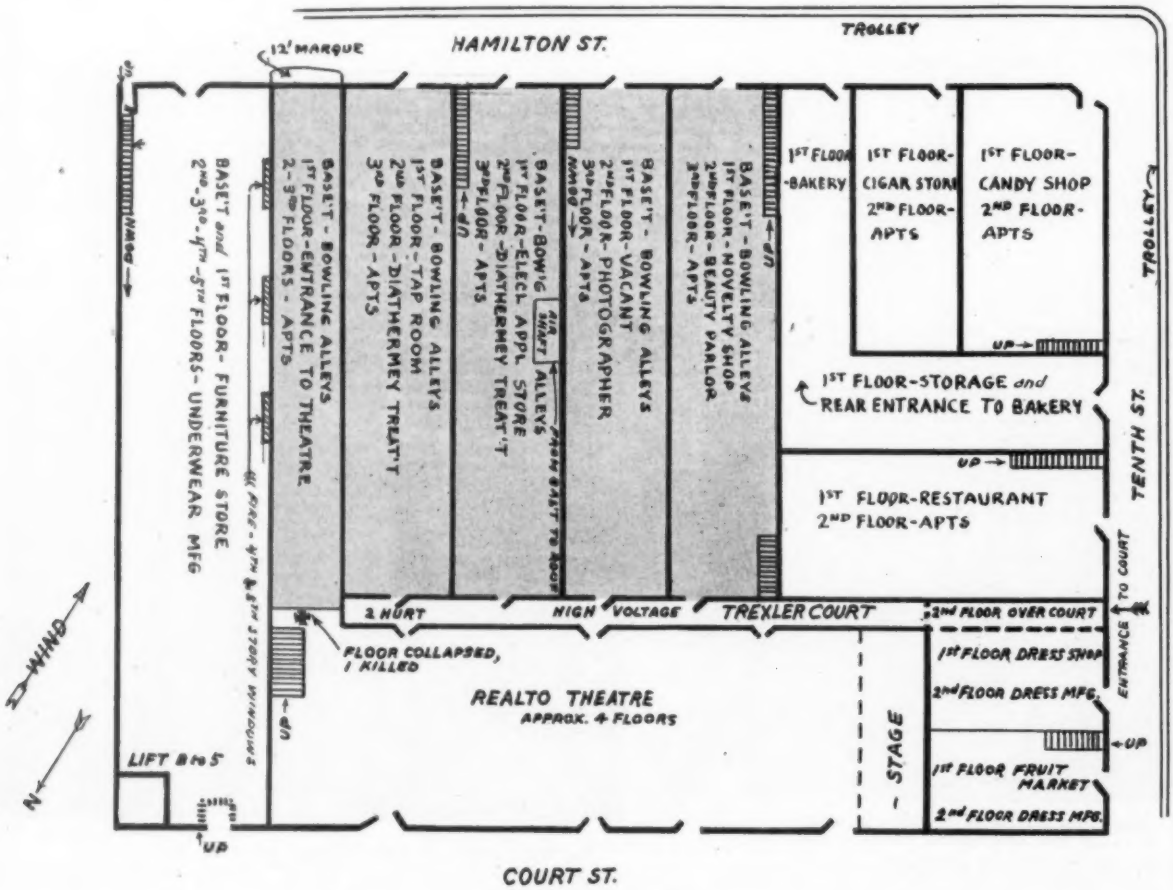
Chief Good joined the Good Will Fire Company as a volunteer in 1896 and was foreman until his appointment, in 1911, as a paid fireman. He became Assistant Chief in 1911, served in that position until he retired in 1936. He returned as Assistant Chief in 1940 by appointment of Councilman Edgar Wolf.

A number of other firemen suffered injuries in addition to the two Musselmans, none, however, was seriously hurt.

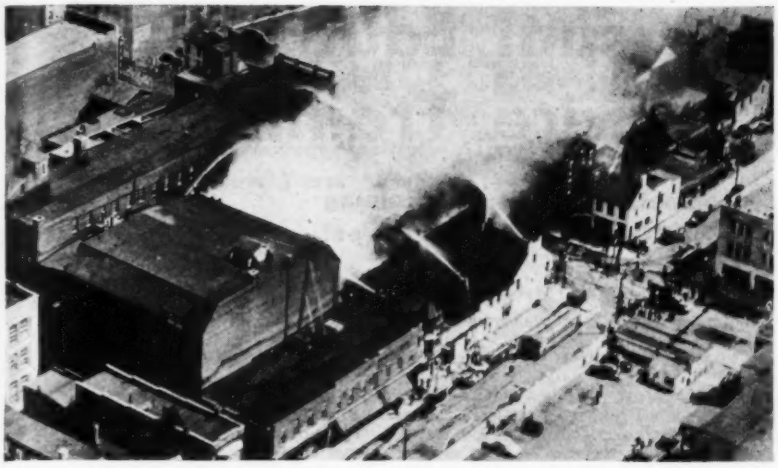
Radio Communications Helpful

Although the Allentown Fire Department does not possess its own radio communication facilities, the local police radio was pressed into service to cope with emergencies.

Radio cruiser cars were stationed at strategic points on every side of the fire, maintaining close communication with police headquarters and, through it, with the fire service. In addition an "emergency precinct" was set up, with telephone communications, from which


HAMILTON ST.
TROLLEY
12' MARQUE
1ST FLOOR-BAKERY
1ST FLOOR-CIGAR STORE 2ND FLOOR-APTS
1ST FLOOR-CANDY SHOP 2ND FLOOR-APTS
1ST FLOOR-STORAGE and REAR ENTRANCE TO BAKERY
1ST FLOOR-RESTAURANT 2ND FLOOR-APTS
TENTH ST.
TROLLEY
BASE'T - BOWLING ALLEYS 1ST FLOOR-ENTRANCE TO THEATRE 2-3RD FLOORS - APTS
BASE'T - BOWLING ALLEYS 1ST FLOOR-TAP ROOM 2ND FLOOR-DIATHERMEY TREAT'T 3RD FLOOR - APTS
BASE'T - BOWLING ALLEYS 1ST FLOOR-ELECT. APPL. STORE 2ND FLOOR-DIATHERMEY TREAT'T 3RD FLOOR - APTS
BASE'T - BOWLING ALLEYS 1ST FLOOR-VACANT 2ND FLOOR-PHOTOGRAPHER 3RD FLOOR - APTS
BASE'T - BOWLING ALLEYS 1ST FLOOR-NOVELTY SHOP 2ND FLOOR-BEAUTY PARLOR 3RD FLOOR - APTS
BASE'T and 1ST FLOOR-FURNITURE STORE 2ND-3RD-4TH-5TH FLOORS-UNDERWEAR MFG
2 HURT
HIGH VOLTAGE
TREXLER COURT
2ND FLOOR OVER COURT
ENTRANCE TO COURT
FLOOR COLLAPSED, 1 KILLED
REALTO THEATRE
APPROX. 4 FLOORS
1ST FLOOR DRESS SHOP
2ND FLOOR DRESS MFG.
1ST FLOOR FRUIT MARKET
2ND FLOOR DRESS MFG.
STAGE
LIFT Bns 5
WIND
N
COURT ST.

Plan of Allentown Fire Area



Aerial View of a General Alarm Fire Which Swept Through a Half-Dozen Buildings in Downtown Allentown, Pa.

all calls concerning the fire were handled.

The broadcasting of the fire over public radio stations acquainted neighboring communities of the possible disaster and offers of aid poured in. Before 11:00 A.M. Reading and Bethlehem officials offered to send firemen, police and apparatus but this was not required. At about 4:00 o'clock two carloads of Reading firemen arrived headed by Chief Bell without apparatus. Chief John Schwede headed a delegation from Bethlehem and firemen from Easton, Coopersburg, Nazareth, Cetronia and others nearby communities reported in. The Mack Manufacturing Company, whose plant is nearby offered a new Mack Type 21 pumper to Councilman Wolf and Chief Marcks but this also was not needed.

Firemen Lose Equipment

In a report to FIRE ENGINEERING, Chief Marcks stated that the entire Allentown fire force was *not* employed at the fire. The district alarm brought the Assistant Chief, three pumpers and two aerial ladder trucks. The General Alarm, sent in by Chief Marcks, brought two additional pumpers and two combination wagons. This left in service two pumpers and three combinations. Many of the pumps are of 1000 GPM capacity.

The Allentown Fire Department is one of the largest semi-volunteer departments in the country, numbering 81 paid and over 4,000 volunteers.

It is reported that there was no shortage of water, approximately 80 pounds being maintained at the hydrants throughout the fire.

Firemen stretched 11,000 feet of two-and-one-half inch hose from 18 fire hydrants, in many cases utilizing hydrant pressure wtihout pumpers. Seven 50-foot sections of hose were burned. Three ladders, one a 24-foot aluminum type, and two 12-foot roof ladders, were abandoned when fire broke through walls of buildings against which they were erected. Some other minor equipment also was lost.

All off-shift firemen reported in for duty and all the city's disaster force including the Red Cross were mobilized. The Salvation Army's mobile canteen served coffee and food to the firefighters, while the Red Cross and other agencies attempted to care for the homeless.

One other fire was reported during the general alarm blaze, but this was extinguished by stand-by companies. Shortly after 11:00 P.M. in the evening, a fresh outbreak brought additional forces to the Rialto Building as a safety measure.

Hull, Quebec, Suffers Heavy Loss

March was ushered out in the Dominion with a spectacular fire which caused a loss of between $1,000,000 and $2,000,000, and damaged the 45-year-old interprovincial bridge, consumed the mountainous pulpwood stocks of the big E. B. Eddy Company paper mill and threatened the entire Hull waterfront.

The blaze, of as yet undetermined origin, started in the wooden deck of the Alexander bridge, as it was known, which connects Ottawa, Ont., and Hull, Que., during the evening of March 29. Aided by a strong wind, the blaze destroyed a considerable part of the bridge and spread to piles of pulpwood below the bridge structure on the waterfront, producing the most spectacular conflagration in the Canadian capital district since fire swept the two cities in 1900.

Hull firemen at one end of the bridge and Ottawa fire fighters at the other were able to control the blaze after it had eaten out the first few spans of the 1901 structure, leaving them a twisted mass of steel. Showers of blazing embers, meanwhile, swept over the huge Eddy plant which sprawls along the river, and eventually meets the equally big J. R. Booth plant. Firemen who stood their ground in the inferno, concentrating a wall of water in the 100-foot gap between the fringe of the pulp stockpile and the Eddy plant eventually controlled the situation.

Fire forces of the two cities, aided by comrades from Napean and volunteer workers, were able also to keep the flames from reaching storages of oil and sulphur. Two box cars laden with a type of chlorine gas used in the manufacture of pulp were removed from the fire zone with only minutes to spare. Hundreds of tons of sulphur were wet down as a precautionary measure.

A drenching rain, following about twenty-four hours after the fire was under control, was welcomed by the tired firemen battling the stubborn blaze eating its way through the pulp stockpile.

The fire resulted in the enforced layoff of hundreds of workers, and ate up thousands of cords of badly needed newspaper potential. A score of fire fighters were treated for burns during the fire. Telephone and power wires went down, and some firemen had narrow escapes when high tension wires snapped.

All the emergency forces, fire, police, medical, as well as the Hull Regiment were mobilized.

Railroad Losses $1,953,996

Fire losses to railroad properties and equipment last year amounted to $1,953,996 as compared with $2,406,236 in 1944, according to Walter C. Neely, president, Mutual Fire, Marine & Inland Insurance Co. of Philadelphia.

Paper Mill Fire Nets $2,000,000 Loss

Flames soar into the smoke-blackened sky as the huge wood stockpile at the Eddy Company Paper Mill, in Hull, Canada, is devoured by the inferno. Log carrier foundations are blazing away, and a few minutes after the photo was taken, the structure collapsed. While fire was controlled before it spread to the plant building, it consumed an estimated $2,000,000 worth of logs in the stockpile.

Applying Visual Education To Fire Service Training

Is There Something More to Training Than the Fire Department Drill Tower?

By C. N. PENN
Chief, Dallas Fire Department

EVERY Fire Chief is greatly concerned about the training program of his department. He recognizes the necessity of training for he knows his department will perform at fires in the same manner as the members have been trained. Good training will definitely reflect on job performance.

Some thirty or more years ago the fire department drill tower was instituted by the larger cities for the purpose of training firemen in the various evolutions pertaining to their work. This might possibly be considered the first important step toward raising the efficiency of the fire service through training. While this was an important step forward, little progress has been made until recent years to improve our training methods. The drill tower, while it has served a good purpose and will possibly always be desirable for certain phases of training, has become more or less obsolete. Entirely too much time has been devoted to performing mechanical drill evolutions or exhibition drills, and not enough time and attention given practical drills simulating some actual fire condition. It is my belief that the modern Fire Training Building will replace the out-of-date drill tower.

In outlining a training program, it is most important to give due consideration as to the most effective approach to the mind of the learner. Before learning can take place, there must be a real desire or an appreciation in the mind of the learner for the subject or evolution being taught. We are told by some of our leading educators that the average person will retain in his mind approximately 87 percent of what he sees and only about 7 percent of what he hears. If this is true, it would appear that the best appeal would be through the learner's sense of sight.

Visual Education Stressed

We are conducting in the Dallas Fire Department a program of visual education and simulated fire ground drills as one phase of our training. Our drill tower is used for another phase of training; however, we hope that in the near future we will be provided with a training building. We have learned that the members of the department are much more interested in simulated fire ground drills than in the old routine tower drills. They feel like they are being personally benefited. Firemen are not satisfied after they have remained in the service for several years to continuously be expected to perform the same drill evolutions as in recruit training. There must be an advancement if progress is to be expected.

Within the past several months we have set up a fairly complete photographic division within our department which serves both the Training and Fire Prevention Divisions. Among the major equipment now in this division we have: a 16mm movie camera, a 16mm sound projector, a 4x5 press-type camera, a 2¼x3¼ press-type camera, a 35mm "candid-type" camera, a slide and strip film projector, with complete accessories for each. Our dark room is equipped with two enlargers, one large and one small, a large electric print dryer and a considerable amount of miscellaneous equipment which is used in developing films and making finished photographs and slides.

This photo division is now engaged in making a series of motion pictures and 35mm film strips and slides on the various evolutions used in the fire service. When completed, this series will be rotated among the various stations in Dallas at regular intervals, so that our firemen can be kept informed on the very latest information on fire-department tactics. Instead of filming the old exhibition drills and evolutions, we are attempting to confine our activities to those evolutions that will be of use whenever fires occur. Our photographer reports to all large or unusual fires and, if conditions permit, records activities there either by movies or still pictures. When these pictures have been developed, they are used to perform a "post mortem" of the fire. That is, we attempt to show the men some of the errors made in extinguishing the fire and point out methods of improving their efficiency. At the same time many good points are brought to their attention and credit given to the officers and men responsible.

Editor's note: It will hardly be denied that the most important factor in the post-war rehabilitation of the fire service is the personal equation. Tomorrow's fire service is going to be no better than the men who make it. And their ability to advance the fire service by improving fire prevention and fire suppression methods and techniques will depend to great extent upon the way they are taught and trained in every root and branch of their calling.

Ever since serious minded students of fire control have weighed the wartime training given Naval fire-fighters, they've begun to ask some pertinent questions among them: Is the old training of the fire-horse days good enough for today's automotive and airplane era? . . . Will the old orthodox pre-war training equip the post-war fire-fighter to meet today's and tomorrow's post-war fire control problems? . . . If we are to speed up fire communications with radio;. improve .apparatus. with larger booster tanks, better pumps, fog-nozzles, metal ladders and so on—why, then, should we not cast aside precedent in our training of the personnel who are to use and operate this improved equipment? . . . Are the old-fashioned drill tower and the "drill tower evolutions" outmoded?

Generally, the answer is that yesterday's ways were good enough for yesterday—but they won't do for the fire service of the atomic age.

This doesn't mean there is going to be an overnight revolution in the fire service. As a whole, the men of the fire service are not given to discarding the old for the new until the new has proved itself better than the old. But deep in the strata of the service, among the fire officers with vision to welcome the new, and courage to try it out, things are 'cooking.'. The following article by Chief C. N. Penn of Dallas is right in line with this premise.

Slides to Be Used

We are planning to make a series of slides and film strips of all of the major business and industrial buildings within our city during the next few months. These slides will point out the main points of interest to the fire-fighter, such as: standpipe connections, sprinkler connections, main sprinkler valves, stairways, elevators and other vertical openings, etc. At the same time, any extra hazardous processes or installations are recorded so that all men expected to fight fires in these buildings may be forewarned so that extra caution may be used in case a fire actually occurs. All important means of ingress and egress are photographed so that when the series on one particular building is shown, every fireman seeing it will have a reasonably clear picture of the entire building in his mind. These slides and film strips are not intended to take the place of inspection of the buildings by the fire-fighters, but will be a supplement to these inspections and will enable us to

(*Continued on page* 348)

PHILADELPHIA FIRE FIGHTERS CHECK LARGE CHEMICAL FIRE

Second Serious Multiple Alarm Fire in 23 Hours Taxes Efforts of Tired Force

A Staff Report*

FOLLOWING the six-alarm downtown fire of less than a day before, firemen of Philadelphia were called upon to fight a near-conflagration on April 20, in the Bridesburg plant of the Barrett Division of the Allied Chemical & Dye Corp., in suburban Frankford.

The Barrett plant, which has known a number of fires, sprawls over seven and one-half acres in an industrial and residential section of the Quaker City. The building destroyed was one of a dozen similar structures and was used for the storage of chemicals for manufacturing of cleaning solvents. It was of brick and steel construction, 60-feet in height and measured 75 by 250 feet. It was practically windowless, automatic metal shields blocking all apertures except for two windows and one door, a fact which greatly complicated fire fighting operations.

A muffled explosion at 10:26 A.M. signalized the outbreak of the fire. This was followed at intervals by nine additional blasts, one of which blew off the roof of the structure.

Alarms in Quick Succession

The Philadelphia Fire Bureau received the first alarm at 10:26 A.M., and this was followed by additional alarms at 10:33, 10:42, 10:48, 11:03, 11:09 and 11:35 A.M., bringing over 75 pieces of fire equipment to the scene.

Witnesses reported that until about 11:00 A.M. the fire appeared to be confined to the lower part of the building. At that time came the blast that lifted the roof. This was followed by other explosions that kept firemen at a respectable distance. Shortly before 11:30, the tenth blast shot flames from the first floor door over an eight foot cement wall which separated the building from Buckius street. At 12:30 almost the entire interior of the building was destroyed, the stills and other equipment being reduced to twisted metal, and at this time firemen observed evidence of weakening of the walls.

Shortly before 1:00 P.M., the east wall on the Frankford Creek side collapsed, but firemen, having been forewarned, had withdrawn to a safe distance.

At one time flames leaped forty feet to another plant building also reported filled with chemicals, but a fortunate shift in the wind aided firemen, using heavy streams, to control this extension. The heat from blazing benzol and solvents was so intense that heavy caliber streams turned quickly to steam. At one period, the apparatus of Engine Companies 33 and 26 caught fire while parked in the plant yard, but the flames were extinguished with chemicals and the trucks moved to safety. Telephone poles were ignited, impairing telephone service.

Navy Asked to Send Foam

When the seriousness of the fire became apparent, Philadelphia firemen requested the Philadelphia Navy Yard to furnish additional supplies of foam, and shortly before 1:00 P.M. a truck-load of 5-gallon cans was delivered by Navy forces to the hard-pressed firefighters. The foam was used to protect surrounding exposures and help confine the fire. Firemen reported that at times the deluge of water appeared to have no effect on the flames.

Chemical Plant Swept by Explosions and Fire

A bursting ball of flame shoots skyward as an explosion rends the Barrett Division plant of the Allied Chemical and Dye Corporation in Frankford, Pa. The fire set up pillars of smoke and flame visible six miles away.

The Red Cross and the Frankford Disaster Preparedness and Relief Committee had representatives in the area by 11:00 A.M., when the great clouds of smoke indicated a possible major disaster. In mid-afternoon, members of the Yeadon Volunteer Fire Company appeared in uniform at the plant gates and offered their services. Tired municipal firemen gladly assigned them hose lines while they took a brief "breather."

Ten ambulances and first aid services from the universities and hospitals were on duty, as was the Second Alarmer Association and its equipment to provide coffee and sandwiches.

As the fire assumed threatening proportions, forty nearby families were removed from houses on Backius, Milnor and Bermuda streets and police threw a cordon around the area to control the large crowds of spectators drawn to the scene by the clouds of smoke and the movement of apparatus.

A score or more firemen and some plant employees, who fought the fire in its initial stages with chemicals, were injured—none seriously, however. Most of the casualties were burns inflicted by hot coal tar, and eye infections. One employe was treated for a wrenched back when he was knocked down by a hose that got out of control.

The Barrett Division buildings have been the scene of a number of fires in

Chemical Fire Smokescreen

Explosions from highly inflammable chemicals sent smoke hundreds of feet into the air as a six-alarm fire swept through the Allied Chemical and Dye Corporation's Barrett Division Plant at Frankford. This aerial view shows dense smoke from burning chemicals blanketing northeast Philadelphia.

the past twenty years, the most serious of which occurred eight years previously almost to a day, on April 17, 1938. Then, one man died of burns and 19 others were also burned, while hundreds of persons were driven from homes in the fire that did extensive property damage.

In another fire on April 14, 1944, a woman employe was killed and three other persons seriously injured when a container of acid exploded in the plant's laboratory. The company makes roofing and paving material and in 1939 erected a new building for the production of synthetic phenol, a basic agent in the manufacture of plastics.

While 75 pumpers, ladder trucks and other miscellaneous fire apparatus were operating at the Barrett seven-alarm blaze, ten minor fires broke out in the city between 10:30 A. M. and 12:30 P.M., calling into acton virtually every piece of the city's fire fighting equipment.

All these fires, however, were handled by companies that had either re-located to provide measure of protection for areas vacated by "home companies" or by forces held to protect high hazard districts.

These simultaneous alarms demonstrated the wisdom of maintaining an effective striking force of reserves, strategically placed, during fires of large proportions.

TESTS SHOW LARGE LOSSES IN LADDER PIPES AT HIGH FLOWS

Figures for Friction Loss in 3½-Inch Hose Tally Closely with Table Values

By George S. Lockhart
Chief of Fire Department, Minneapolis, Minn.

FRICTION loss and discharge tests were run on April 5, 1946, at Minneapolis by Sanford Herbert, Engineer, Underwriters Inspection Department, in cooperation with the Minneapolis Fire Department.

The object of these tests was to determine a 41-pound loss we had experienced in operating ladder pipe. We found the loss of pressure was in the ladder pipe nozzle, the ram's horns, small piping, etc. The nozzles we have here are evidently of 600 to 700 gallons capacity. We were operating 1¾-inch tip discharging 954 gallons of water per minute. You will note that the experiment was carried out on the 3-inch hose.

Layout—3-inch hose from hydrant to nozzle—one gage (A) set in line 50 feet from hydrant, gage (B) set in line 50 feet from nozzle. Gage (C) used for reading nozzle pressure from 1½-inch tip.

I—Gage A = 73 lb. By formula = 24½ × (1.1 + .192 × 9) = 70.3
Gage B = 25 lb. (Improper type piezometer. Should have been 29.9 lb.)
C = 24½ lb. N.P., or 333 G.P.M.
Loss between A and C = 48½ lb.
Length of line A to C = 450 ft.
Actual loss in 100 feet 3-inch hose with 333 G.P.M. = 10.8 lb.
Theoretical loss in 100 feet 3-inch hose with 333 G.P.M. = 10 lb.

II—Gage A = 71½ lb. By formula = 28½ × (1.1 + .192 × 7) = 69.7
Gage B = 28½ lb. (Should have been 34.65 lb.)
Gage C = 28½ lb. N.P., or 356 G.P.M.
Loss between A and C = 43 lb.
Length of line A to C = 350 ft.
Actual loss in 100 feet 3-inch hose with 356 G.P.M. = 12.3 lb.
Theoretical loss in 100 feet 3-inch hose with 356 G.P.M. = 11.5 lb.

III—Gage A = 69 lb. By formula = 33 × (1.1 + .192 × 5) = 68
Gage B = 33½ lb. (Should have been 40.2 lb.)
Gage C = 33 lb. N.P., or 383 G.P.M.
Loss between A and C = 36 lb.
Length of line A to C = 250 ft.
Actual loss in 100 feet 3-inch hose with 383 G.P.M. = 14.4 lb.
Theoretical loss in 100 feet 3-inch hose with 383 G.P.M. = 13.0 lb.

IV—Gage A = 65¼ lb. By formula = 39.75 × (1.1 + .192 × 3) = 66.6 lb.
Gage B = 40 lb. (Should have been 48.25 lb.)
Gage C = 39¾ lb. N.P., or 420 G.P.M.
Loss between A and C = 25½ lb.
Length of line A to C = 150 ft.
Actual loss in 100 feet 3-inch hose with 420 G.P.M. = 17.0 lb.
Theoretical loss in 100 feet 3-inch hose with 420 G.P.M. = 15.5 lb.

V—Gage A = 124 lb. By formula = 77¾ × (1.1 + .192 × 3) = 130.3 lb.
Gage B = 79¼ lb. (Should have been 93.15 lb.)
Gage C = 77¾ lb., or 588 G.P.M.
Loss between A and C = 46¼ lb.
Length of line A to C = 150 ft.
Actual loss in 100 feet 3-nich hose with 588 G.P.M. = 30.8 lb.
Theoretical loss in 100 feet 3-inch hose with 588 G.P.M. = 28.5 lb.

VI—Gage A—Reading wrong. Test results inaccurate.

VII—Gage A = 126½ lb. By formula = 79¾ × (1.1 + .192 × 3) = 133.5 lb.
Gage B = 86¼ lb. (Should have been 95.35 lb.)
Gage C = 79¾ lb., or 595 G.P.M.
Loss between A and C = 46.5 lb.
Length of line A to C = 150 ft.
Actual loss in 100 feet 3-inch hose with 595 G.P.M. = 31.2 lb.
Theoretical loss in 100 feet 3-inch hose with 595 G.P.M. = 29.2 lb.
Pump pressure by pump gage = 174 – 12 lb. (correction) = 162 lb.
Pump pressure by formula = 79¾ × (1.1 + .192 × 4) = 149 lb.

VIII—Gage A = 124½ lb. By formula = 61¾ × (1.1 + .192 × 5) = 127.2 lb.
Gage B = 66¼ lb. (Should have been 74.3 lb.)
Gage C = 61¾ lb., or 524 G.P.M.
Loss between A and C = 62¾ lb.
Length of line A to C = 250 ft.
Actual loss in 100 feet 3-inch hose with 524 G.P.M. = 25.1 lb.
Theoretical loss in 100 feet 3-inch hose with 524 G.P.M. = 23.1 lb.
Pump pressure by pump gage = 163 lb. – 12 lb. (correction) = 151 lb.
Pump pressure by test gage = 147 lb.
Pump pressure by formula = 61.75 × (1.1 + .192 × 6) = 139.1

IX—Gage A = 175½ lb. By formula = 88¾ × (1.1 + .192 × 5) = 182.8 lb.
Gage B = 95½ lb. (Should have been 106.1 lb.)
Gage C = 88¾ lb., or 629 G.P.M.
Loss between A and C = 86¾ lb.
Length of line A to C = 250 ft.
Actual loss in 100 feet 3-inch hose with 629 G.P.M. = 34.7 lb.
Theoretical loss in 100 feet 3-inch hose with 629 G.P.M. = 32.1 lb.
Pump pressure by pump gage = 228 lb. – 14 lb. (correction) = 214 lb.
Pump pressure by test gage = 215 lb.
Pump pressure by formula = 88¾ × (1.1 + .192 × 6) = 200 lb.

SUMMARY

Friction loss in 3-inch hose with 2½-inch couplings

Discharge G.P.M.	Actual Loss by Test Lb. per 100 Ft.	Theoretical Loss Lb. per 100 Ft.	Difference Lb.	Difference %
333	10.8	10.0	0.8	8.0
356	12.3	11.5	0.8	6.95
383	14.4	13.0	1.4	10.8
420	17.0	15.5	1.5	9.7
524	25.1	23.1	2.0	8.7
588	30.8	28.5	2.3	8.1
595	31.2	29.2	2.0	6.9
626	34.7	32.1	2.6	8.1
			Average	8.4%

Conclusions: While entirely correct results cannot be expected using gages instead of mercury manometers, this test shows that the 3-inch hose used has a friction loss characteristic of 8 to 11% greater than generally established figures indicate. The average would be approximately 8½% greater.

Comparison of Results with Formula

$$N.P. = \frac{E.P.}{1.1 + KL}$$

or $E.P. = N.P. \cdot (1.1 + KL)$

Test	Reading on Gage A Lb.	Pressure Gage A by formula if Gage A were on Pumper	Difference in Lb.	Discharge G.P.M.
I	73	70.3	+ 2.7	333
II	71½	69.7	+ 1.8	356
III	69	68	+ 1.0	383
IV	65¼	66.6	— 1.35	420
VIII	124½	127.2	— 2.7	524
V	124	130.3	— 6.3	588
VII	126½	133.5	— 7.0	595
IX	175½	182.8	— 7.3	629

	Reading on Pumper Gage	Pressure at Pumper by Formula	Difference in Lb.	Discharge G.P.M.
VIII	147	139	+ 8.0	524
VII	162	149	+ 13.0	595
IX	215	200	+ 15.0	629

Conclusions: In the first tabulation it is observed, when the nozzle pressure is used as the basis figure, the formula E.P. = N.P. (1.1 + KL) shows that allowance is made for friction loss in the pumper discharge pipe, valves, connection, etc. This is indicated by the formula figures which are 1.35 lb. to 7.3 lb. greater than the Gage A readings obtained in the test for flows from 420 to 629 G.P.M. It is probable with the Minneapolis 3-inch hose this difference should be even greater as is indicated in the second tabulation where the actual pumper pressures are greater than the formula figures to the extent of 8 lb., 13 lb. and 15 lb. with flows of 520 G.P.M., 595 G.P.M. and 629 G.P.M. respectively.

Test for Friction Loss in 4-Way Siamese and Ladder Pipe

I. Layout—Three 150 ft., 3-inch lines from No. 11 pumper siamesed into 4-way supplying the ladder pipe (from aerial on Ladder No. 1) equipped with 1¾-inch tip.

Test Results

Pumper pressure (test gage) 170 – 1 = 169 lb.
Pumper pressure (pumper gage) 182 – 13 = 169 lb.
Pressure on 4-way = 125 lb. (Should have been 143 lb.)
Nozzle pressure = 110 lb. = 954 G.P.M.
Loss between pumper and nozzle = 59 lb. for 954 G.P.M.
On this basis the loss between pumper and nozzle would be = 73 lb. for 1,064 G.P.M.
and = 74 lb. for 1,072 G.P.M.
By formula E.P. = N.P. (1.1 + .115 × 1.15)
110 lb. nozzle pressure = 135.6 lb. E.P.
137 lb. nozzle pressure = 168.8 lb. E.P.
139 lb. nozzle pressure = 171.3 lb. E.P.

II. Layout—The three lines siamesed into 4-way with 1¾-inch tip on outlet.

Test Results

Pumper pressure (test gage) 170 – 1 = 169 lb.
Pumper pressure (pumper gage) 182 – 13 = 169 lb.
Pressure on 4-way = 115 lb. (Should have been almost 137 lb.)
Nozzle pressure = 137 lb. = 1,064 G.P.M.
Loss between pumper and nozzle = 32 lb. for 1,064 G.P.M.
On this basis the loss between pumper and nozzle would be = 26 lb. for 954 G.P.M.
and = 32½ lb. for 1,072 G.P.M.

III. Layout—The three lines siamesed into a 3-way with 1¾-inch tip on outlet.

Test Results

Pumper pressure (test gage) 170 – 1 = 169 lb.
Pumper pressure (pumper gage) 182 – 13 = 169 lb.
Nozzle pressure 139 lb. = 1,072 G.P.M.
Loss between pumper and nozzle = 30 lb. for 1,072 G.P.M.
On this basis the loss between pumper and nozzle would be = 29½ lb. for 1,064 G.P.M.
and = 24 lb. for 954 G.P.M.

SUMMARY

Pressure loss between Pumper and Nozzle

Three 150-ft. 3-inch lines to	954 G.P.M.	1064 G.P.M.	1072 G.P.M.
4-way to Ladder Pipe with 1¾-inch nozzle	59 lb.*	73 lb.	74 lb.
4-way with 1¾-inch nozzle	26 lb.	32 lb.*	32½ lb.
3-way with 1¾-inch nozzle	24 lb.	29½ lb.	30 lb.*
By Formula E.P. = N.P. (1.1 + KL)	25.6 lb.	31.8 lb.	32.3 lb.

*Actual test figure.

Conclusions: These figures show a friction loss of approximately 33 lb. in the ladder pipe and 2 lb. in the 4-way with 954 G.P.M. discharge. The gage on the 4-way showed 125 lb. with 110 lb. nozzle pressure on the ladder pipe. The ladder pipe loss was 33 lb. Considering negligible loss between the 4-way gage and the ladder pipe connection, the pressure on the 4-way gage should have been approximately 110 + 33 = 143 lb. This indicates a pressure registration on the 4-way gage about 18 lb. less than the actual condition. On this basis, with a flow of 1064 G.P.M., the gage would register approximately 22 lb. lower than the actual. Under Test II with nozzle attached to 4-way outlet, the 4-way gage should have indicated almost the same pressure as the pressure at the nozzle, which was 137 lbs. However, the gage showed 115 lb., which would be about 137 — 115 = 22 lb. low. This compares with the calculated discrepancy of 22 lbs. with 1064 G.P.M. flowing and shows that the actual pressure in the 4-way is not indicated on the gage. This is somewhat similar to the discrepancies indicated by Gage B in the tests conducted on the 3-inch hose, the latter being definitely due to improper type of piezometer. The following table is interesting in that it shows in a simple manner from the test data the effect that a ladder pipe, or for that matter any other device, with high friction has on the nozzle pressure and the actual water discharge.

Three 150-ft. 3-inch lines into:	Pumper Pressure Lb.	Pressure on 1¾-inch Tip Lb.	Per Cent	Discharge in G.P.M.	Per Cent
4-way and Ladder Pipe with 1¾-inch nozzle	169	110	79.14	954	88.99
4-way with 1¾-inch nozzle	169	137	98.56	1064	99.25
3-way with 1¾-inch nozzle	169	139	100.0	1072	100.0

"WATER WETTER" PROVES EFFECTIVE ON BRUSH AND DUFF FIRES

Increases Penetration of Water into Dry Duff and Speeds up Extinguishment of Smouldering Fire

SURFACE tension reducing agents, or "water wetters," are the newest innovations in the field of fire extinguishing. They are chemicals which, when dissolved in water, increase the penetration of the water into materials which ordinarily are largely impervious to water.

For example, plain water will not penetrate cotton bales. But add to the water one per cent of "water wetter," and the solution will quickly and thoroughly saturate the bale.

J. R. Hill, Fire Warden of the Town of Coventry, R. I., recently ran tests under actual fire conditions to determine the effectiveness of a "water wetter" solution (using "Drench," a "water wetter" manufactured by Arnold-Hoffman Co., Providence, R. I.) on fires in dry duff (partly decayed vegetable matter on the forest floor), scrub oak and brush piles.

Three tests were run. Details are given below:

Test No. 1

Wind: S. W. Approximately 25 mph.
Location: Williams Crossing fire trail.
Area Involved: Approximately ½ acre, south side of hill; very dry duff, scrub oak and brush piles.
Cause of Ignition: Dottle from pipe which was knocked on ground by resident of area.
Nozzle Used: A 1½-inch high velocity tip and a 1-inch forest fighter spray applicator at 50 pounds per square inch, one per cent solution of "Drench."
Amount Used: 200 gallons—one per cent solution of "Drench." Thorough saturation of duff was accomplished. No necessity for trenching or rewetting fire line.

Fire No. 2

Wind: N. W. Approximately 20 mph.
Location: Flat River Section of Coventry.
Cause of Ignition: Spark from train.
Area Involved: Approximately ¾ acre. Very heavy grass and scrub oak.
Nozzle Used: A 1-inch forest fighter spray applicator at 50 pounds per square inch.
Amount Used: 100 gallons, one per cent solution of "Drench." Thorough saturation of grass and duff was observed. No rewetting necessary.

Fire No. 3

Wind: S. W. 30-40 mph.
Location: Harkney Hill Road, Coventry.
Cause of Ignition: Unknown.
Area Involved: Two acres pine, oak and very dry and well-matted brush piles; very dry duff, including pine needles.
Equipment Used: A 1-inch forest fighter spray applicator at 50 pounds per square inch. Indian pumps.
Amount Used: 800 gallons, one per cent solution of "Drench." Thorough saturation of area was accomplished, especially noticeable around bases of stumps.

Dry ground conditions usually prevail when our worst fires occur. Dry duff is extremely resistant to ordinary water and deep penetration to the soil is difficult. To be sure that fire lines are completely out and stay out, it is necessary to get water penetration down to and into the soil, or remove the duff by trenching.

Schenectady Wins First Prize in Fire Prevention Contest

The City of Schenectady, outstandingly "fire prevention conscious," celebrated the winning of first place among the city fire prevention winners in the 50,000-100,000 population class conducted by the National Fire Waste Council of the United States Chamber of Commerce.

The occasion marked the first time that Schenectady had won the coveted plaque, and Chief James Higgins, of that city, and municipal officials are "quite happy about the whole thing."

It has been pointed out that Schenectady's fire losses during 1945 were the lowest since 1920, and further, that losses in last year's Fire Prevention Week in that city were absolute zero—the first time this has happened in the history of the fire department.

Pole Slide Protector

A novel protector for sliding poles has been designed by William W. Seide, a member of the Rochester, N. Y., Fire Department.

William W. Seide

The purpose of the protector is to prevent injury to persons on the apparatus floor who may be standing too near the pole when it is used, as well as to protect firemen using the pole from injury by contact with objects such as chairs, etc., which may have been placed in close proximity to the pole.

The protector consists of a metal cylindrical sleeve about seven feet in height and three feet in diameter. It rides vertically on three rods attached to the ceiling and terminating about seven feet from the floor. It is raised by two cords, or wires, which are attached to it; at the other ends of the cords, or wires, are counterweights of proper size to raise the sleeve rapidly. The raising mechanism is tripped automatically by the man sliding when his feet come in contact with the trip-switch platform at the base of the sleeve. The sleeve rises to the ceiling, and is reset by hand after all men have reached the apparatus floor.

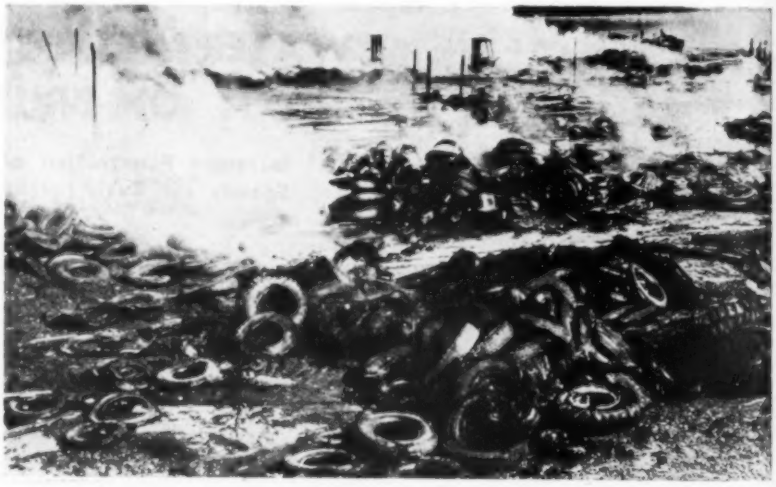
In the event that the sleeve fails to rise when a man slides the pole, an emergency door (spring-closed) in the cylinder permits him to emerge from it without loss of time.

Tires Lost in Marine Warehouse Fire

Although marine censorship, clamped on immediately following a fire in the early hours of March 27, in South San Francisco, prevented all the facts from becoming public, it is disclosed that in the blaze 12,800 new tire casings, and 50,000 new inner-tubes, were destroyed, along with two makeshift wooden warehouses.

"Unofficial Marine estimates" place the loss at $750,000, including in addition to the rubber stockpile and warehouses a large truck and more than a score of loading vehicles.

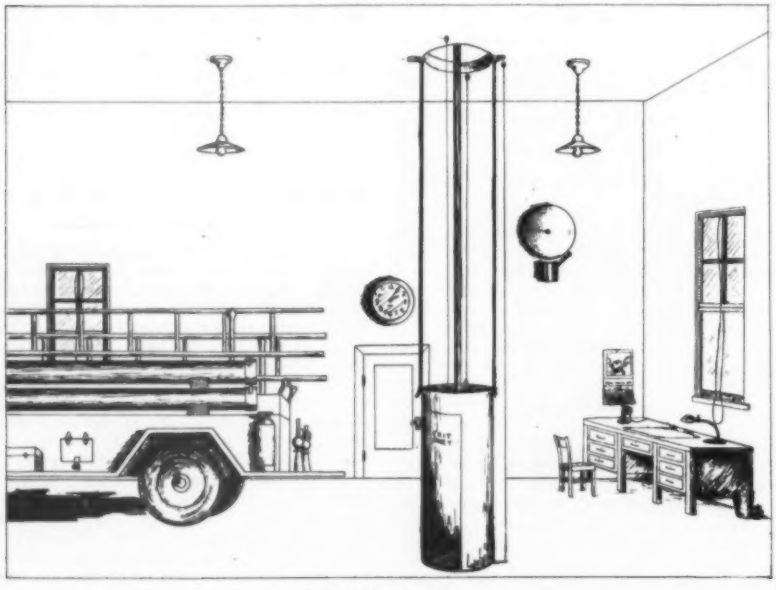
The fire, of undetermined origin, occurred at 2:30 A.M., with the discovery that the larger of the two wooden structures, 200 x 150 feet, was almost fully alight. Fire quickly communicated to the smaller warehouse, 150 x 50 feet, and despite the efforts of fire forces from South San Francisco, San Mateo, San Bruno, Burlingame, Lomita Park and Milbrae, aided by two companies from San Francisco, the buildings and most of the contents were destroyed.



12,800 Tires and 50,000 Inner Tubes Were Destroyed in This Fire in Two Marine Warehouses at South San Francisco

Three firemen and one Marine were overcome by smoke and given first aid by an ambulance crew from the San Mateo Community Hospital. None was seriously affected.

DON MATTHEWS



Pole Slide Protector

Transformer Plant Total Loss

Attributed to overheated electric baking ovens in the lacquer room of the Gardner Electric Manufacturing Company, Emeryville, Calif., fire destroyed the block long, two story plant in what is reported as Metropolitan Oakland's biggest, most destructive fire of the year. The loss is estimated at between $400,000 and $500,000.

The fire was discovered at 11:25 P.M. and in spite of the efforts of the entire Emeryville Fire Department under Fire Chief Edward T. Schleason, reinforced by four companies of the Oakland firefighters under Assistant Chief Manning Basch and Battalion Chief Frank Kispert, the plant proved a ready prey to the fierce flames, which at times rained sparks over wide areas, threatening the entire center of Emeryville. A fire wall is said by fireman to have aided in preventing extension of the fire to the Morehouse Mustard and Supply Company adjacent to the Gardner Co.

Six Emeryville and fourteen Oakland firemen were treated for injuries at first aid stations.

It is said this was the third total-loss fire on the same site since 1927.

DON MATTHEWS

For Practical Discussion of Current Fire Department and Fire Management Problems

RESPONSIBILITY FOR BURNING GRASS OFF EMPTY LOTS

THE discussion in this round table is a continuation of that which appeared in the April issue of FIRE ENGINEERING on assuming responsibility for burning grass off empty lots.

The general response from our readers makes it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject or on next month's which is given in a box on the following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

Bradley Stinson, Chief, Anderson, Ind.: I do not feel that it is the responsibility of the fire department to burn off grass on all vacant lots. However, we consider it the duty of our Fire Prevention Bureau to order it to be done, where it is a hazard to other property.

The city might be responsible if adjacent property were damaged, if the fire department assumed the actual work.

I also believe it would encourage people to burn in the open.

I do not believe that the fire department can afford to put a company out of service to do this work, thus leaving a territory temporarily unprotected.

Abel S. Eldridge, Chief, Newport, R. I.: I do not believe it is the responsibility of the fire department to burn off grass on all vacant lots within the city limits but only those that would constitute a hazard to surrounding property should fire start in them.

In my opinion, with hose lines stretched and charged and trained men on the job, there should not be any damage to adjacent property.

This should not encourage citizens to burn in the open, but rather should make them conscious of the dangers of burning without proper protection. The precautions which trained firemen take should, and in most cases do, set an example to the public. This careful method of removing hazardous areas is a primary lesson in fire prevention.

I would consider that dispatching apparatus to burn off these lots as precautionary measures was protection rather than negligence of the district concerned. Proper distribution of apparatus from other stations could very well overcome any danger of material damage in the affected area. Or apparatus from sparsely settled or low hazard areas could be dispatched to burn off lots, leaving the adjacent sections completely protected. On the other hand, these adjacent areas might well be in a serious danger of extensive damage because in case of fire in these vacant lots, apparatus must be dispatched from the immediate vicinity without advance preparation, thereby definitely leaving the locality without adequate protection.

Walter B. Hutton, Chief, Waukegan, Ill.: It is not our responsibility to burn grass off vacant lots, but our department burns off grass where a request has been made, if time permits. Where a request has been made, the department would be responsible for damage to adjacent property.

I believe this would encourage citizens to have their property burned off by men who would know how to go about it and would discourage them from trying to burn off their own lots.

It is not the practice of our department to dispatch an engine company on these grass burning details. We have an emergency rig with a 250-gallon booster tank, Indian Pumps, hand pumps and brooms. Two men are assigned to this detail, leaving a full engine and truck in the fire houses with one man short on each piece of apparatus.

James Thompson, Jr., Chief, Irvington, N. J.: The few vacant lots in our city are practically hemmed in by either industry or residences of the high value type. We have no responsibility to burn the grass, but we feel that by dispatching available equipment to burn the grass we have discouraged the practice of violating the law and have protected the structures. Surely, this is our very definite responsibility.

As to the city being responsible if adjacent property was damaged, I feel that we would have a fair chance of avoiding any expense for the fact that our intent in burning the grass is primarily to protect the adjacent property.

Edward J. Page, Chief, Madison, Wis.: It is not the responsibility of the fire department to burn off grass on vacant lots. In the event that adjacent property were damaged, the city would be liable.

Every tme a company, or a number of companies leaves its quarters in response to an alarm, it necessarily weakens the protective structure of the department. Nevertheless, it is of absolute necessity that protection to the surrounding area and control of this type of fire be effected. Your fire records as well as those in our city and many other cities show that this type of fire has too often spread to adjacent property and buildings, causing fire losses of major proportions. It is a problem that should be controlled to a large degree through an educational program conducted by the fire prevention bureaus.

R. L. Lampley, Chief, Montgomery, Ala.: It is not the responsibility of the fire department to burn off grass on vacant lots.

The city would be liable if adjacent property was damaged.

The practice would encourage citizens to burn in the open

The fire department could not afford to dispatch equipment on such missions and it would not be fair to the other citizens of the district for the department to do so. We receive calls almost daily to burn off grass, and if we did, there is no telling how many calls we would receive. All citizens are warned not to burn grass, but to have it cut and removed from the lot.

Louis J. Mosher, Chief, Elmira, N. Y.: It is not the responsibility of the fire department to burn off the grass on vacant lots within the city limits. Our city would not be liable if adjacent property were damaged. I believe the owner of the lot might be responsible.

The fire department cannot always afford to send equipment to grass fires, but in many cases they prevent buildings from being damaged.

William Koerner, Chief, Lafayette, Ind.: Owners are responsible from a health standpoint to keep lots free from woods. If this were enforced, it would not be necessary to have accumulations of debris on lots. If kept clean from year to year the accumulation could be removed with ashes, etc., each Spring.

C. N. Carrell, Chief, Santa Monica, Cal.: It is not the responsibility of the fire department to burn the grass on vacant lots. The Public Works Department plows them up.

Should the fire department burn the grass on these lots, they would, I believe, be responsible for damage to adjacent property.

The fire department cannot afford to dispatch equipment for this purpose. Some benefit might be accomplished by the department by sending a two-man detail out with a small truck.

HERE IS THE QUESTION

1. **Is it the responsibility of the fire department to burn off grass on all vacant lots within the city limits?**
2. **Would the city be liable if adjacent property was damaged?**
3. **Would, or would not, this encourage citizens to burn in the open?**
4. **Can the fire department afford to dispatch equipment on such missions and at the same time leave valuable property in their respective districts unprotected for the length of time it would take apparatus from other districts to respond to that particular district?**

James MacGregor, Chief, Edmonton, Alta.: It is not the responsibility of the fire department to burn grass on vacant lots within the city limits. However, we do assist citizens desirous of having their vacant property burned off where a danger to adjoining property exists.

The fire department would be responsible if adjacent property were damaged.

From experience gained through the past years citizens generally do not take upon themselves the responsibility of burning off grass lots. They call on the fire department to do the work. However, should they be in a hurry to have the work done and are prepared to do the burning themselves, a permit is issued to the person who is going to do the burning and is obtainable from any fire hall.

The department has on hand a 250-gallon water tank mounted on a chassis with a portable pump attached. This piece of apparatus is used for the purpose of burning off grass and is manned by three firemen. This method permits the regular apparatus to remain in their respective halls, for the protection of all properties. The above tank usually stays in one district for say one day, then moves to another district the following day. In case of emergency this tank can be called without delay.

Ben J. Zahn, Chief, Ann Arbor, Mich.: We have never assumed that it was the responsibility of the fire department to burn off grass on vacant lots within the city limits, but we have in many cases stayed until they were finished burning off after we were called to a fire of that type, when we felt that it was for the good of surrounding property to have the job finished under our supervision. However, we definitely do not go out to set the fires ourselves.

As fas as a city being liable for any damage done by fire, in our city, or for that matter in the State of Michigan, I know of no law, city or state, to which anyone would have recourse in the failure of a fire department to answer a call because they were responding to a call elsewhere.

During the grass fire season we occasionally are out on four to five calls at the same time, but we seldom have more than one piece of apparatus with two men on call. We have a small pickup equipped with two each of soda acid, foam, carbon tetrachloride and two pump tanks, plus 50 feet of garden hose with a hydrant adapter, shovels and brooms. This truck is manned by two men and takes care of ninety per cent of all grass fires. We receive many requests from citizens each spring for permission to burn off adjacent lots. This permission is usually granted on condition that certain regulations are complied with.

The one thought that we always keep in mind, however, is that at no time will we take our last two pieces of apparatus to a grass fire and lay outselves open to criticism should property more valuable take fire. Since we cover about six and a half square miles from one station, we have to be cautious.

A. J. O'Mara, Chief, Galveston, Tex.: It is not the responsibility of the fire department to burn off grass on vacant lots within the city limits. We have an ordinace which prohibits citizens from burning trash in the open within the city limits.

I do not believe it is a safe practice to dispatch equipment on such missions and at the same time leave valuable property in their respective districts unprotected.

Frank Pulaski, Chief, Boise, Ida.: It is the responsibility of the street department in our city to burn grass on vacant lots. The city would be liable if adjacent property were damaged.

Citizens must have a written permit from the fire chief to have any fire.

Walter S. Blanton, Chief, Savannah, Ga.: It is not the responsibility of the fire department to burn off grass on vacant lots. The city is not liable for damage to adjacent property. If the city assumed responsibility it would encourage citizens to burn in the open.

The city cannot afford to dispatch equipment of such missions and leave valuable property unprotected.

Leo J. Urbanski, Saint Joseph, Mo.: It is definitely not the responsibility of the fire department to burn off grass on vacant lots. We are practically run ragged responding to fires that are carelessly started by individuals. In almost all such grass fires, no one can be found who will admit he started the fire.

T. J. Kelly, Chief, Springfield, Ill.: The fire department is not responsible for the burning of grass off vacant lots.

We encourage citizens to burn in alleys before 5 P. M.

The fire department cannot afford to dispatch equipment on such missions.

Russell Wright, Chief, East St. Louis, Mo.: The fire department is not responsible for burning off grass on vacant lots within the city limits.

We have preached and pleaded with the public time and again through the press, asking them to refrain from careless burning of lots.

C. A. Delaney, Chief, Lakewood, Ohio: We consider it to be the responsibility of the owner to clear his property and not that of the fire department to burn or otherwise remove grass or brush from vacant lots within the city.

Lakewood has an ordinance which prohibits the burning of anything in the open except where there has been a permit issued by the chief of the fire department. It is quite rare for us to issue such permits and if a permit is issued, the permit holder is required to cut the grass and brush, gather the cuttings into heaps and burn them in such manner as to not jeopardize surrounding property. Where a permit is denied, the property owner is required to remove the cuttings to the city incinerator.

The matter of liability presents a legal question, the answer to which is beyond the scope of the fire chief.

I am inclined to be of the opinion that burning of grass on vacant lots by the fire department or anyone else would tend to encourage others to do the same.

I do not know of any fire department that is so well manned and equipped that it can afford to use its personnel and apparatus for such tasks. Leaving valuable property without the maximum protection available, to burn grass off vacant lots, even though it be for but a few minutes, would be, in my opinion, a display of poor judgment on the part of the person charged with the responsibility of rendering fire protection.

Rod A. Porter, Chief, Portage, Wis.: Previous to the war the fire department frequently burned off certain grass areas in the city and considerable time was spent in the spring and fall on this detail. During the war the department discontinued the practice because of the manpower shortages.

It is unlikely, I believe, that the city would be liable for damages occurring as a result of fire department burning activities but the chief of the fire department might find himself in hot water.

The department received an increasing number of requests for this service as the result of its prewar activities in grass burning, and since discontinuing the practice the requests are practically nil.

From our experience in dealing with many grass fires every year, we believe that there is a considerable risk attached to the practice of dispatching men and equipment on grass burning details. We have not infrequently been called away from such work to cover in for other apparatus called for fire duty or to abandon the grass fire work and answer an alarm. A small city department can get into plenty of difficulty in attempting to supervise and control local grass burning. The plan is not without its merits, but we believe the good accomplished can be outweighed by the potential troubles incurred.

Rocco Cacciatore, Fireman, Yonkers, N. Y.: It is not the responsibility of the Yonkers Fire Department to burn grass off vacant lots.

If there were such an ordinance the city would be liable for damage to adjacent property. If the fire department did this work, it would encourage citizens to burn in the open with the thought in mind that they were cooperating with the fire department. In so doing they would endanger themselves. In our city we had a case where a man was burning grass. His clothing became ignited and he later died from the burns.

The fire department cannot afford to dispatch equipment on such missions. Many times people in our city pull a fire alarm box because of a brush fire, bringing out a full first alarm assignment. Many of these fires are extinguished by one company, thereby leaving other apparatus in quarters. Then again, if several brush or grass fires are burning in different parts of the city it eliminates that many companies from protecting tenements, dwellings, factories and business sections.

HERE IS THE QUESTION FOR THE NEXT ISSUE

1. **Does your department dewater basements of buildings following fires?**
2. **If so, what method and equipment are employed?**
3. **Have they proven satisfactory?**
4. **Do you make a charge for this service? If so, how much?**

Manufacturers' Announcements

Fog Fire Fighting Units

A new fog unit has just been placed in production for industrial and institutional use by Bowser, Inc., Fort Wayne, Indiana, Fred S. Ehrman, Bowser general sales manager, announced recently. Mr. F. J. Lee has been named divisional sales manager for the new Bowser unit.

An entirely new product by Bowser, liquid control specialists since 1885, the fog fire fighting units are being built in two models, the only difference being that Model 1030 has a shorter hose and smaller cabinet than Model 1033, which has 100 feet of one-inch hose.

The unit is connected directly to a water line. A swing-joint mounting on the wall or a stand pipe makes it possible for the cabinet to revolve in alignment with the direction of the hose pull.

A valve actuating fixture holds the fog nozzle for instant use and fog appears at the nozzle within four seconds after reaching for the hose. The automatic valve releases the spray to full capacity instantly upon removing the nozzle from the cabinet fixture.

Heating Device for First Aid

The M.S.A. Redi-Heat Block, a new rapid and safe emergency source of heat for first aid use, employing no liquids of any kind, has been made available by Mine Safety Appliances Company of Pittsburgh.

The M.S.A. Redi-Heat Block is entirely self-contained and requires only one minute to reach top heat. Wrapped in a towel or blanket, the Block maintains its temperature for approximately one hour, and furnishes safe heat for emergency treatment of victims of shock or other injury.

The Redi-Heat Block consists essentially of a block of lightweight metal, encased in a special cover and containing a replaceable Redi-Heat Charge. The Redi-Heat Charge is a small, sealed metal cylinder containing a newly-developed chemical compound. The charge is activated by simply raising and releasing a spring-loaded lever—creating a chemical reaction which evolves maximum safe, dry heat.

F. M. Urban Advanced

Frank M. Urban has been appointed merchandise manager of the mechanical goods division of United States Rubber Company. He began his career with United States Rubber Company in 1929 as a salesman of mechanical goods in Chicago. In 1935 he became assistant sales manager in Chicago. Four years later he was transferred to the company's general offices in New York, and in 1944 was appointed assistant merchandise manager, the position he held at the time of his new appointment.

National Foam System Issues New, Complete Catalog

The first public showing of National Foam System's complete line of Aer-o-foam and mechanical foam equipment for applying the fire extinguishing liquid is contained in a new 20-page catalog being distributed by the company.

As specialists for many years in foam fire fighting, National Foam System produces both chemical and mechanical foams, with emphasis in the new catalog on Aer-o-foam, which became famous during World War II as "bean soup," so called by the U. S. Navy, which took delivery on more than 5,000,000 gallons.

The new catalog is fully illustrated with photographs, charts, and drawings, and gives detailed data on Aer-o-foam and how to apply it easily and quickly to extinguish fire.

Graybar to Distribute Guided Radio Units

Guided Radio Corporation of New York, through its president, R. H. Kingsley, announces the appointment of the Graybar Electric Co., Inc., as nation distributors of their post-war portable electric megaphone for commercial, industrial and marine uses.

This same type of Guided Radio communications equipment was employed in all theatres of the war by the United States Navy and Amphibious Forces in naval and landing operations, proving one of the outstanding audio electronic devices to be used in the conflict.

The equipment is now in wide use by fire departments, police departments, aviation companies and steamship lines.

General Detroit Opens Export Offices

Opening of a new Export Office in New York by the General Detroit and its affiliate, The General Pacific Corporation, is announced by E. A. Warren, vice president and treasurer. In charge of the office will be the newly appointed manager of export operations, R. J. Strand. Export operations will be carried on in Latin America, Europe, the Middle East and the Far East, concentrating on the sale of fire extinguishers, motor fire apparatus, and allied products of the General Detroit and General Pacific Corporations.

Mr. Strand has had wide experience in the exporting field, having been Central West manager of American Exporter and prior to that sales manager, merchandising counsel and correspondent in Europe, China, Japan, India and Latin America. He was also affiliated with the Mutual Broadcasting Co., Field Publications, and International News Service. The new export offices are at 76 Beaver Street, New York 5, N. Y.

Data on Kato Light Plants

Kato Engineering Company, Mankato, Minn., has published a new folder entitled "Standard A. C. Current Anywhere With Katolight Plants.

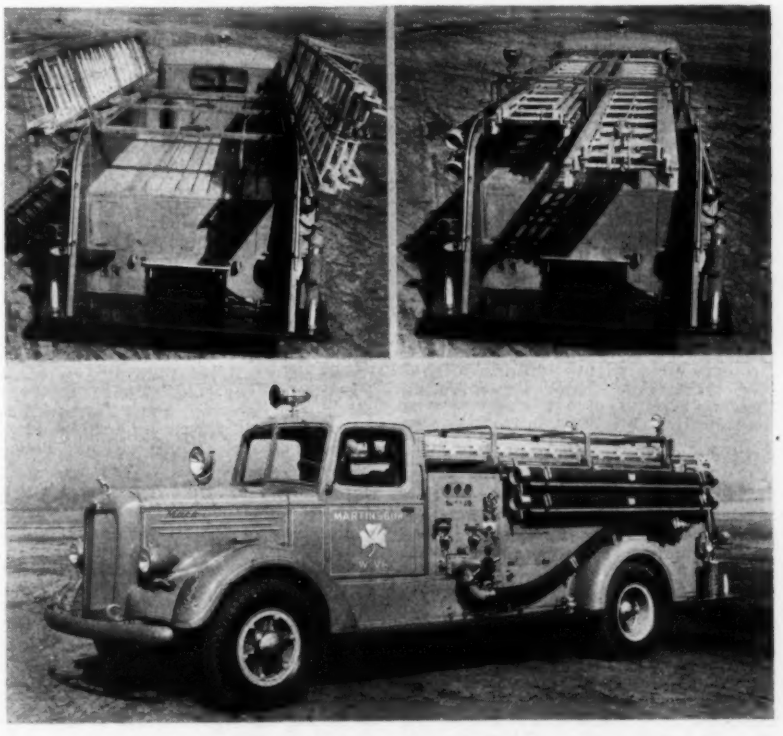
Pumper Has Novel Features

The illustration below shows a special Type 85 750-gallon triple combination pumper recently delivered to Martinsburg, W. Va., by Mack-International Motor Truck Corporation.

Several features of this unit mark a departure from conventional designs. For instance, it is equipped with supplemental swivel hose connections to make permanently coupled pony suction hose for a fast hydrant connection.

An unusual ladder-carrying arrangement is employed. The racks, top-mounted, are hinged, thus allowing them to be swung outward when the hose is loaded. Two of the three ladders are 24 feet long; the third, for roof work, is 14 feet. All are of aluminum.

(*Continued on page* 310)



Martinsburg, W. Va.'s New 750 G.P.M. Pumper

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Follows Doctor's Advice—Burns!

In London, Mrs. Ethel Roys, 27, told that her house was burning, stuck her head out of an unstairs window and replied: "I can't come down. The doctor said I was not to get up."

Mrs. Roys was burned to death. The man who told the coroner's inquest of this queer adherence to "prescription" saved four other occupants of the house.

* * *

Tappings Give Vamps the "Bird"?

Villagers in Barrington, Ill., suburb of Chicago, and the local vamps have discovered there's nothing eerie about the strange, rhythmic rapping and tapping that has 'roused some of them at dawn for several weeks.

Local Sherlock Holmes have traced the racket to the Village Hall and to a woodpecker evidently faced with the housing shortage, who has been bent on opening up quarters in the fire siren on the roof—and who was his own tin "roof cutter".

The wayward press showed pix of the dauntless Fire Chief Victor D. Reike, head of the local Braves, perched atop the Village Hall, repeating shotgun in hand, laying for Mr. Woodpecker, lest he "tap in" a false alarm from the siren and cost the Village three bucks per each for the twenty firemen!

* * *

Noses Failed to Find Fire—
But Sprinklers Lost Their Heads!

From Don Baird, Fredericton, N. B., "Faithful Reader", comse this 'un.

The other night the Fredericton Fire Department rolled to a private box at the provincial Parliament Buildings to find the sprinkler alarm ringing. The Brothers quickly stretched a line and followed a trail of smoke to the basement of the main building. But they searched in vain for its source.

After twenty minutes of sniffing about, a curious bystander drew the boys' attention to the sound of rushing water in the next door Departmental Building. Investigating, the lads found three inches of water in the basement and a rubbish fire—out!

The smoke had followed a pipe tunnel between the two buildings, which share the same sprinkler system. The Brothers were slightly chagrined. But you can't blame them for following their noses!

* * *

Hot Off the Tape

In Wildwood, N. J., police were investigating five fires which broke out in the Wildwood High School within two days. . . . The Boston Firemen's Relief Fund is $500 richer following receipt of a check from Haffenreffer & Co., Inc., with a "thank-you" note for work well done in saving plant from fire. . . . Mrs. Eva Parenteau, 30, and son Raymond, were trapped and burned to death in West Greenwich, R. I., in fire resulting when a Navy fighter plane, pilotless, fell on her house and exploded. . . . When a tornado ripped through Anniston, Ala., in April, 4 were killed, 40 hurt; communications were destroyed; a thread mill reported burned; twenty-six airplanes destroyed at Gadsden Airport. Anniston Fire Department reported only two minor fires caused by short circuits. . . . James Marvin, was burned to death in a fire in a truck before the driver discovered the blaze and stopped in Darien center, near Stamford, Conn. Marvin was hitchhiking, with the knowledge of the driver, and permitted to snooze in the body of the truck which was loaded with Naval stores. Origin of the fire was not determined. . . . When an explosion started a fire in electric motor of a New York-Bound New Haven train at Darien Center, a general alarm brought firemen from Darien, Noroton and Noroton Heights, but operations were delayed until power was shut off, when fire was extinguished with six chemical tanks and two booster lines. . . .

* * *

Truly an "Eagle's Eye"

Mortimer J. Bonham, N. J. Division Fire Warden may enjoy the distinction of being the first birdman to detect and catch a fire-setter from the air.

According to state police headquarters in Trenton, N. J., Mr. Bonham, while observing forest fires in Ocean County by airplane, saw a man setting a fire on Power Road. Keeping the man under observation, Bonham notified the Toms River Forest fire headquarters of what he had seen. As the fire wardens on the ground were reporting the incident to the Toms River Police station, the man entered an automobile and drove off along Dover Road, according to State Police. A patrol car was sent out to intercept him, Mr. Bonham following the motor car in his plane. As the car with the suspect approached the Keswick Colony, Mr. Bonham dropped a note asking that the automobile be stopped.

The note landed in a tree. He scribbled another message, which landed on the Colony grounds. Later he saw the automobile halted and learned that the State Police had reported the driver-suspect to be a fireman of the Fort Dix Fire Department, a civilian group employed by the Government.

The fire allegedly started by the fireman "firebug" burned 300 acres of forest before being controlled, a State Firewarden reported. Police did not place the suspect under arrest but ordered him to appear for further questioning at the Toms River Police Station.

* * *

Add Department of Red Faces!

Members of Engine Company No. 2 of the Valley Stream, L. I., Fire Department had red faces that weren't the result of radiated heat from a fire! Seems that the vamps were entertaining ten of their members who recently returned from military duty at a west-end restaurant one Saturday night, when a fire air horn not far away tooted its signals. Sirens screeched to add to the din. But there was no grand exodus of the vols' who went right on enjoying the festivities in blissful ignorance—and deafness. Mebbe it was the competition of the cornetist or mebbe it was something else, but tennyrate it wasn't until some of the "West-Ender" firemen came in and began to rib the celebrants and asked "where was Company Number 2?" that they knew there had been a fire, and that they were A.W.O.L. The fire proved to be of the "grass" variety and Number 4's lads quickly sniffed it out, pondering the while what had happened to delay their fellow-firemen. (Thanks J. Kearns, and Bill Thompson).

* * *

Roll Out the Bar'll

According to the Shell Rock, Ia., News, "the Shell Rock Fire Company has purchased $5,800 worth of new equipment for fighting of Country and town fires . . . the truck is a pumper with a 500-gallon per minute capacity and pumps for 2 standard size hoses, *besides carrying a 350-gallon barrel* with a booster hose for small fires." (This emphasis is ours!)

* * *

Merry Runaround for Midland Park

The Brothers of Midland Park, N. J., got the merry old run-around t'other day. Believe it or not, they drove over a mile, in truth all around the town, to answer a call for a fire "that they were already at—"

It happened this way: Chief John Pittman, Jr., was giving his men a good drill by burning brush on the Clarence Knauss property on Prospect street. Fred Bockop, who lives on Colonial Road, nearby, saw the fire, but not the firemen—and pronto, turned in an alarm.

The Brothers raced to Park and Linwood avenues, location for the "box," and found no fire. Investigation disclosed that the call had come from Park avenue and Colonial Road—right from which they had "taken off." Selah!

* * *

Orchids to Tot of Five!

Curley-haired Maureen Kennedy, 5, of Dorchester, Mass., proved herself a real little heroine when a box of matches with which she and playmates were playing ignited, setting fire to the playsuit of Alma M. Dorgan, also of Dorchester.

Maureen kept her playmate from running in her blazing clothes and tried to beat out the flames with her little hands, but the burning playsuit proved too much for her. Racing to a nearby water faucet with a tin can, Maureen returned and extinguished the flames which threatened her playmate's life before neighbors could come to her aid.

The badly burned child was attended by Dr. Harry F. Shapiro. He said that Maureen's quick action undoubtedly saved the life of her child companion. Maureen explained to her parents that *"firemen put out fires with water and so I did, too, when I saw Alma's dress afire. I was scared that Alma would burn up."*

* * *

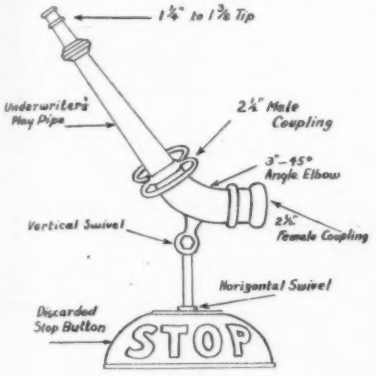
What Price Fire Prevention?

Describing the institution as "a horrible, antiquated, overcrowded fire trap," Dr. Herbert H. Herskovitz resigned January 28, as assistant superintendent of Norristown State Hospital. He said the fault lies in the fact the public has not been convinced that "millions of dollars should be spent in an attempt to rehabilitate the insane" in safe and proper surroundings. [Thanks S. C. Wintermute.]

Short Cuts and Gadgets

IMPROVISED HIGH PRESSURE HOSE HOLDER*

Small towns and villages are usually deficient in turret and deck guns, and deluge sets for operating heavy duty and high pressure streams. Yet, sooner or later every community may have need for such an appliance.



Where, for any reason a reason a community fire department is unable to secure a regulation type deluge set or high pressure hose holder, the following improvised "gadget" may prove handy in a pinch.

The plan is to utilize one or more discarded Underwriter's play pipes, to be found in the storeroom of the average fire company (if they are not in service on trucks).

Procure a "STOP" standard or "button" from the street department and mount the assembly in its center. The horizontal swivel is made by using a ¾-inch bolt and a piece of pipe. This swivel is welded to the vertical swivel (see photograph). The vertical swivel is kept tight by a wing-nut or by a nut with crank attached. The 45-degree angle 3-inch pipe fitting is also welded to the vertical swivel. Fire department 2½-inch connections are welded to the 45 degree angle elbow, making it ready for the playpipe assembly.

This type portable high pressure pipe has been tested at 250 pounds per square inch nozzle pressure and it stayed in place without manual aid, we are told. The nozzle should be tested locally to get the desired pressures for the most effective fire stream.

Similar improvisations have been encountered throughout the country where, for the most part they are stored, ready for quick use in the company quarters (if not carried on apparatus). One man can easily load the device into a car and hurry to the fire ground if it is needed.

*From "Tricks of the Trade," 1941 Fire Department Instructors' Conference.

* * *

IMPROVISED CHAFING BLOCK

Somebody once said that one of the things that distinguishes a smart fire officer is his ability to improvise in an emergency. If this be true, we'll rate Captain George P. Zink of the Fair Lawn, N. J., Fire Department in the up-and-coming class for this "Short Cut". The captain says:

"At a recent drill I noticed considerable oscillation in the 2½-inch line connected to the high side of the pump and, not being equipped with a chafing block, looked around for a reasonable facsimile, coming up with the Cooper Hose Jacket, which did the job to perfection."

Well that's finding another use for a popular old appliance. Of course if the Jacket were needed to repair a break in a hose line it could quickly be shifted from the pump.

* * *

SPRAY FROM FIRE EXTINGUISHERS

Although we've yet to try it, a contributor claims that small oil fires may be extinguished with a soda and acid extinguisher, by having the operator place his finger over the nozzle to break up the stream into a fine spray, or directing the stream upon a flat surface and thus deflecting it into a spray that will fall upon the burning surface.

* * *

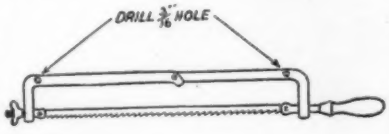
TO LOCATE AMMONIA LEAKS

It is said ammonia leaks may be quickly located by lighting a sulphur taper (resembling a pipe-cleaner) and passing this along the ammonia carrying pipe or unit until the burning taper suddenly forms a dense whitish cloud. That will indicate the location of the leak or break. Tapers may be secured at most ammonia works (many cold storage plants and other businesses using refrigerants have them).

* * *

TO CARRY SPARE HACK SAW BLADES

Some truck companies and most rescue companies carry hack saws. Very often in using these saws the blade breaks and there is a delay while a new blade is procured.



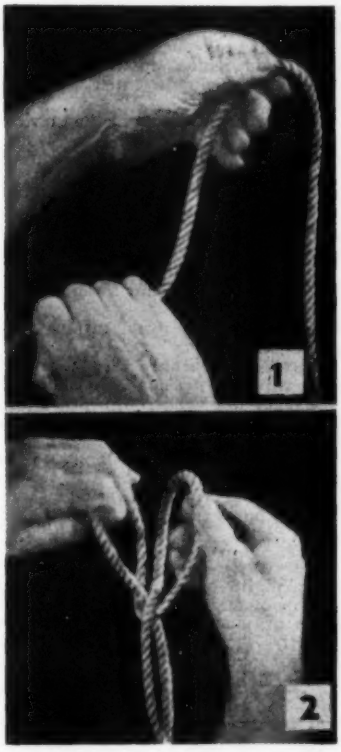
The following suggestion is submitted by Lieut. William J. Cook, Ladder Company 123, New York Fire Department, as a "Short Cut" to, eliminate the need of hunting up another blade when the blade in use breaks:

"Drill two 3/16th-inch holes at the places designated in the accompanying illustration, and clamp extra blades to the hack saw with 3/16th-inch machine screws and wing nuts. When new blade is needed, it will only be necessary to remove wing nuts, and remove the blade needed."

Parenthetically, we might add that this idea might well be adopted in the shops in fact, wherever a hack saw is or may be used.

FOR A QUICK CLOVE-HITCH

In this issue we present the first of a number of "Short Cuts" in knot tying and the use of ropes—not with the idea of revising or changing the knots accepted as fundamental by the fire service but rather to present what may be new or different methods of tying the knots themselves, and of applying them to various operations common to the fire service.



The following idea for speedily tying a clove-hitch, one of the "standard" knots in the "firemacopae" is submitted by a recognized authority in "knot culture", William Henry Davis, Brooklyn, N. Y. He says:

"In making a clove around the middle of an object, little can be done to facilitate matters except to hold one hand in position to receive the end as it comes through, under its own part on the second turn. But for dropping a clove over the end of an object (as a pikepole or hook) try this—

Pick up the rope with the right hand *palm down*, as in Fig. I. Reach beyond the right hand and pick up rope with the left hand, *palm down*. Twist both hands to the right to give the rope a half turn (180 deg.). Combine the two half-hitches, thus formed to complete the clove (Fig. II).

For the several tricks for this purpose, this is the simplest and most direct."

* * *

The Old Timer Says—

When you enter a smoky buildin' off a ladder, feel below ya' with a pike or axe handle, or let yerself down carefullike without lettin' go your grip, because you may be right over a shaft or stairway.

FALSE ALARMS

Boners

More boners are pulled in school exams than there are jokes on national radio programs. Those who don't believe that exams are harder on the teacher than on the pupil should read the following actual answers:

"William Tell invented the telephone."

"Two occupations of the civilized race are work and looking for work."

"In mathematics, Persia gave us the dismal system."

"Chemistry is the study of how a thing that is busted gets together under certain situations, and how them that's together gets separated."

"A circle is a round line with no kinks in it, joined up so as not to show where it began."

"To keep milk from turning sour, keep it in the cow."

"Universal suffrage was when the whole universe was made to suffer."

"Savages are people who don't know what wrong is until missionaries show them."

"An antique is something no one would be seen with if there were more of them, but which everyone wants when no one has any."

Presence of Mind

One night on a sleeper, a pretty young woman was awakened by two drunks arguing outside her berth. Indignantly she said: "Sh-h-h! If you want to make noise at this hour go into the club car."

"Club car? Thash a wunnerful idea," a voice answered. "C'mon out, Beautiful. We don't leave till you come with ush."

With that she rang for the porter. "Porter," she said, "these men are disturbing me."

"She'sh young an' beautiful an' she'sh got to have a drink with ush," stated the drunk firmly.

"Young and beautiful?" inquired the porter. "Oh, *no*, gen'lmen. Ah saw her when she got on, an' *she ain't beautiful.*"

Horrified silence — then retreating footsteps. The next morning, the young lady thanked the porter. "Well, ma'am," he twinkled, "Ah figgered you'd be willing to give up your looks for a good night's sleep."

"Well, ol' Captain Jinks got married once too often!"

"Why, I thought this was his first marriage!"

"Yep, it is!"

A young lady and her aunt, returning home from work on pay day, were relieved of their money by a stick-up man. The lady rushed over to the nearest policeman and exclaimed:

"I've been robbed of my pay and my aunt's pay!"

"Cut out the pig Latin and tell me what happened," the officer ordered.

There's nothing strange about our modern girls being live wires for they carry very little insulation.

"He's Our Most Valuable Man—Used to Be with the Circus!"

Descent of Man

Three monkeys sat in a cocoanut tree,
Discussing things as they're said to be.
Said one to the others, "Now listen, you two,
There's a certain rumor that can't be true,
That man descended from our noble race.
The very idea! It's a dire disgrace!
No monkey ever deserted his wife,
Starved her baby, and ruined her life.
And you've never known a mother monk
To leave the babies with others to bunk,
Or pass them on from one to another
'Til they scarcely know who is their mother.
And another thing! You'll never see
A monk build a fence 'round a cocoanut tree.
Starvation would force you to steal from me.
Here's another thing a monk won't do:
Go out at night and get on a stew;
Or use a gun, or club or knife
To take some other monkey's life.
Yes, man descended, the ornery cuss.
But, brother, he didn't descend from us."

—Author unknown.

Arriving home earlier than usual, the husband found his wife in the embrace of a friend. Friend asserted himself: "Now that you've trapped us, let's have this out man to man. I love your wife, and she loves me. Will you play a game of gin rummy to decide between us?"

"Sure," said the obliging husband, "but how about stakes of a penny a point on the side, just to make it interesting?"

Pancakes

"My friends say it's queer that I'm so fond of pancakes," she told the psychiatrist, "so they sent me to you."

"Well, that's not so odd," he remarked. "I'm very fond of them myself."

"Are you?" she replied, brightening. "Well, you must come over some day, I have seven trunks full."

Chief: "Has the Captain told you what to do?"

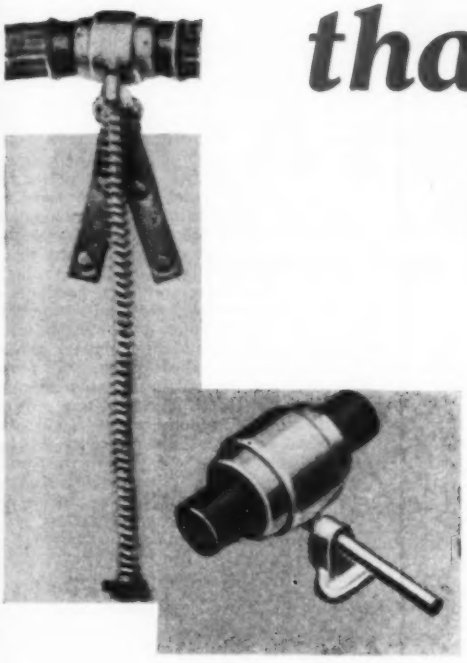
Rookie: "Yes, sir, he told me to wake him up when I heard you coming."

Learning

A pat on the back develops character . . . if administered young enough, often enough, and low enough.

An instrument has been perfected that will throw the voice of a speaker a mile. Now for one that will throw the speaker that far.

What's ATLAS got that other life nets haven't?



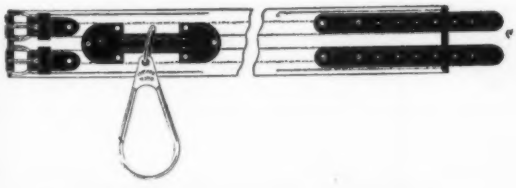
Many features; for instance ATLAS special shock absorbers scientifically engineered with recoil mechanism similar to that used in modern artillery. This exclusive ATLAS feature absorbs the weight of impact, insuring safety to the person jumping and to the men holding the net.

Spring and rod (in fixed position) further insure elimination of strain on men. Double straps at each point of strain, plus a specially made fabric, make this the strongest life net that's on the market.

ATLAS POMPIER LIFE BELTS

Standard of the fire service are equipped with FORGED STEEL HOOKS, CADMIUM PLATED, to meet rigid fire department service.

DEALERS WANTED



AND ATLAS IS THE ONLY LIFE NET THAT HAS THEM.

Saving lives is your first duty. You can't do it unless you have the proper life saving equipment. Ladders are useful but they have only a limited "safe reach." Life nets are not only practical and efficient but are mobile, they can be moved with ease to any point when needed.

You will do better with an ATLAS.

ATLAS SAFETY EQUIPMENT CO., Inc.

26 WARREN STREET * * * * * * * NEW YORK 7, N. Y.

WATEROUS

The Invisible Quality—

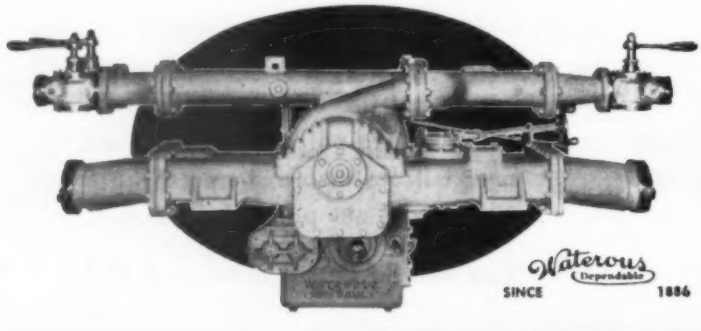
60 Years of EXPERIENCE

There is no substitute for experience—the PROOF gained through the years of what works—and what doesn't work. WATEROUS Pumps give a liberal PLUS VALUE won through 60 continuous years of specialized fine pump manufacture. Quality design, accessibility, simplicity, and dependability assure all around performance.

WATEROUS Pumps are standard on leading makes of fire apparatus. Specify WATEROUS on your next pumper. Write for literature.

WATEROUS COMPANY • ST. PAUL, MINNESOTA

Also Manufacturers of WATEROUS Fire Hydrants



FIRE PUMPS

Visual Education

(*Continued from page 336*)

conduct simulated fire conditions in the various sections of the buildings during drill and school periods.

Our fire-prevention bureau is finding the photographic division a valuable asset in correcting hazardous conditions, as well as aiding materially in the conviction of arsonists. We have found that a few well chosen photographs of hazardous locations in buildings go a long way toward convincing a judge or jury that certain "hard-headed" individuals should be made to clean up their premises. Of course, we have very few instances where it is even necessary to take court action, but in case such action is necessary, we always try to have photographic evidence on hand. Many times we have found that the photographer's visit to a hazardous building produces a psychological effect on the owner or manager that enables us to get the condition corrected in short order, for he realizes that the photographs will probably be used as evidence against him.

Every Fire Marshal has at one time or another found evidence at the scene of a fire that he wished to preserve, but in some cases the very nature of the material prevented him from retaining it in its original condition. Here again our photography division proves its value, for a few good photographs of this evidence before it is disturbed are of great value in case an arson case is filed.

Fire-prevention films and slides made in our own city with local backgrounds will soon be available for use in Dallas schools and before civic clubs and other such groups. These would have already been produced, but the scarcity of film during the war prevented it. With film and other photo supplies becoming more plentiful every day, our photographers will soon be able to proceed with this work. However, at the present time we have a series of movie trailers made by a local film company showing in every theater in Dallas. These trailers point out some of the more common home and industrial fire hazards. A contract has been let to obtain a sufficient number of these trailers to show a different one in each of the 47 theaters in Dallas every week for the next six months.

From the above description of the visual education activities of the Dallas Fire Department, you can see that we believe that visual education is the proper approach to our fire-service training, as well as fire-prevention work and improving relations with the citizens whom we serve.

Nebraska Fire Chiefs Organize

At a recent meeting in Omaha Fire Department Headquarters, Omaha, Neb., fire chiefs from different sections of the state formed the Nebraska Fire Chiefs Association.

Officers elected were: President, Chief Otto Johannes, Columbus; Vice-President, Chief Ben Meister, Omaha; Secretary-Treasurer, Russell D. Salak, Schuyler. Sixteen fire chiefs were present at the meeting and were the guests of Fire Commissioner Joe Dolan and Fire Chief Ben Meister, of Omaha. Organization plans were completed and memberships accepted at the April 23rd meeting, held in Grand Island, on the evening of the first day of the State Fire School.

For Speedy work on a ladder

USE INDIAN FIRE PUMPS

You Can Get Into Action Fast with These Famous Fire Fighters!

Due to the fact that *INDIAN FIRE PUMPS* carry slung on the back, leaving arms free, they are ideal for use on ladders. When it is necessary to make a little water go a long way and get to the blaze quickly use *INDIANS*. They are just as effective on indoor as outside fires.

An *INDIAN FIRE PUMP* will take care of chimney, awning and roof fires and "cover exposures" on nearby property subjected to flying embers and sparks. For use in confined spaces they have no equal.

Firemen who go off the truck with an *INDIAN FIRE PUMP* in hand are ready to take care of the average smaller fire—70 per cent of your calls.

ONLY CLEAR WATER USED— NO CHEMICALS

D. B. SMITH & CO.

406 MAIN STREET, UTICA, N. Y.

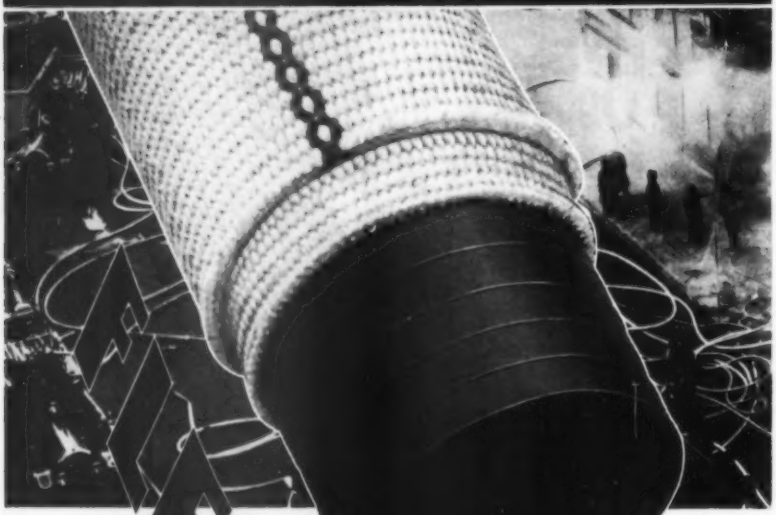
PACIFIC COAST AGENTS

Hercules Equip. & Rubber Co., 415 Brannan St., San Francisco, Calif.
Mill & Mine Supply Co., 2700 4th Ave. So., Seattle, Wash.
Fred E. Barnett Co., 2605 S.E. 9th Ave., Portland, Oregon
Fred E. Barnett Co., 608 Spring St., Klamath Falls, Ore.
Fred E. Barnett Co., Broadway & Harris Sts., Eureka, Cal.
Ray G. Davis Co., 617 E. 3rd St., Los Angeles, Cal.

CANADA AGENTS

Bingham & Hobbs Equip. Co., 305 W. 5th Ave., Vancouver, Canada
Duke Equipment Co., 292 Duke St., Montreal, Canada

Crackerjack
MUNICIPAL FIRE HOSE



FLEXIBLE

specially built for *extra* flexibility

The extra flexibility built into CRACKERJACK fire hose pays a bonus in *minutes* saved and *energy* saved every time it is used. There is obvious economy in selecting a hose that is often going strong after twenty years of active service. More important is the year after year dividend in speed and ease of handling. CRACKERJACK lays faster and loads easier. CRACKERJACK folds easier, making it possible to load far more hose in the hose body. This is the result of using the finest materials and special processes developed over nearly half a century of quality hose manufacture.

FLEXIBLE for speed in handling
FLEXIBLE for ease of handling
FLEXIBLE for compact loading

The AMERICAN RUBBER Mfg. Co.
Park Avenue and Watts Street • Oakland, Calif.

News of the Manufacturers

(*Continued from page* 343)

Fyr-Fyter Acquires Buffalo

The Fyr-Fyter Co. of Dayton, Ohio, has taken over control of the Buffalo Fire Appliance Corp. of Buffalo, N. Y., by acquiring all of its outstanding common stock, according to a joint announcement issued by Roscoe C. Iddings, president of the Fyr-Fyter Co., and Charles H. Stephens, president of the Buffalo corporation. The deal was consummated March 15th.

R. C. Iddings

Both companies are leaders in the manufacture of portable and wheeled fire extinguishers, and Buffalo is also a well-known builder of motor fire apparatus.

C. H. Stephens

In the opinion of Messrs. Iddings and Stephens, the combined research and manufacturing facilities of these two companies will enable each to offer a broader line of products, and to also render a more efficient fire protection engineering service to the public.

A. G. Sullivan

The Buffalo Fire Appliance Corp. continues as a separate entity, with Mr.

FMC HIGH-PRESSURE FOG FIRE FIGHTERS

Underwriters' Laboratories Approved

850 LBS. PUMP PRESSURE!

600 LBS. (OR MORE) GUN PRESSURE!

FMC High-Pressure Fog Fire Fighters are building astonishing records for fast attack . . . quick extinguishment . . . low fire losses . . . minimum damage by water.

This complete unit, recently delivered to Intercourse, Pa., carries 430 gallons of water, two hose lines, two guns and all other necessary equipment.

FMC Original

HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

JOHN BEAN MFG. CO., 709 HAZEL ST., LANSING 4, MICH. • BEAN-CUTLER DIVISION, 409 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

SMOOTHER WATERWAY GIVES MAXIMUM NOZZLE PRESSURE

Each "*Streamlined*" brand Eureka Hose has an exclusive development called Smooth-Interior Filler Ply. This is an individual set of warp and weft cords which completely fill the valleys of the inner jacket, prevent the rubber lining from being forced back into these valleys. Result: no "washboard" waterway nor excessive friction loss; instead—maximum pressure at the nozzle.

Other exclusive Eureka features are Balanced Weave Construction, which eliminates writhing, Bomb Tested Linings, for longer life, and Mildew-Proofing with Formula X.

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

1230 Avenue of the Americas • Rockefeller Center • New York 20, N Y.

Stephens, Mr. Iddings and William M. Wetzel of New York as directors. Mr. Stephens has been re-elected president, and Arthur G. Sullivan, who has had the title of general sales manager, has been made vice president. All other officers also were re-elected.

Acme Gas Mask

The Acme Protection Equipment Company of Pittsburgh, Pa., has announced the sale of its interests in the Acme Gas Mask to a partnership headed by G. M. Glidden, formerly district manager of the E. D. Bullard Company.

G. M. Glidden

Mr. Glidden, who will supervise production and sales as general manager, will transfer operation of the gas mask division from Pittsburgh to new quarters at 3035 W. Lake Street, Chicago, Ill.

To assure contiuous efficient production, a portion of Acme's key personnel will be transferred from Pittsburgh to Chicago.

Power Supply for PA Systems

D. W. Onan & Sons, 43 Royalston Ave., Minneapolis, Minn., manufacture independent AC electric plants for powering mobile address systems. An Onan AC portable power unit is used by Clifford Herring of Fort Worth, Tex., known as the "Voice From the Sky," who broadcast special events by plane. It is said power can be supplied to make the broadcaster's voice heard at a distance of two miles.

Harry Smith in New Post

Announcement is made by Sumner Simpson, president of Raybestos-Manhattan, Inc., that effective March 1, Harry E. Smith of the Manhattan Division, Passaic, N. J., corporation vice-president, will be in complete charge of corporation rubber product sales and marketing.

New All-Out Dry Chemical Extinguisher

Pressurelube, Inc., All-Out Fire Extinguisher Division, 609 West 104th Street, New York 31, N. Y., has announced a new extinguisher designed to combine high efficiency with maximum protection to the user and to equipment installations. It is said to perform effectively under all climatic conditions, in extreme temperatures and in the presence of winds and drafts.

"All-Out" dry chemical is ejected under pressure, in a flat stream, forming a dense cloud which has a smother-

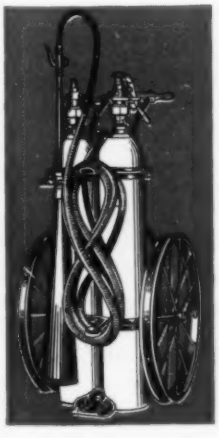
1. QUICK

Fast action hand portable extinguisher with the famous C-O-TWO SQUEEZ-GRIP valve. Quick, simple, safe and effective — as is all C-O-TWO equipment — for incipient fires in paints, lacquer, alcohol and flammable liquids, electrical, automotive and other equipment. Fire-killing dry carbon dioxide gas is non-damaging and non-conducting — no after clean up.

2. FOR RISKY AREAS

Fixed hose reel units provide protection for larger fires. Always accessible in case of fire with adequate length of quick uncoiling, non-kinking hose ready instantly to smother fire with the same dry non-damaging carbon dioxide gas. Listed and approved by Underwriters Laboratories and Factory Mutuals.

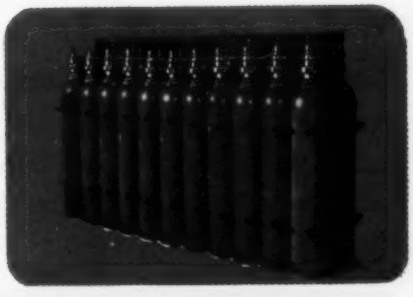
3. MOBILE UNITS



Wheeled portables also give protection for larger fires. Light and easily maneuvered. It's faster, it's simpler and safer. It gets there first when seconds count most. All C-O-TWO equipment is listed and approved by Underwriters Laboratories and Factory Mutuals.

4. MULTI-PROTECTION

Permanently installed systems released manually or automatically to protect one or several hazards from the same system. C-O-TWO original pressure operated systems flood the threatened area with dry, non-deteriorating and non-damaging carbon dioxide gas, the fastest fire-killing agent, and the fire is under control in seconds with no damage to equipment or materials.



C-O-TWO FIRE EQUIPMENT COMPANY

C-O-TWO

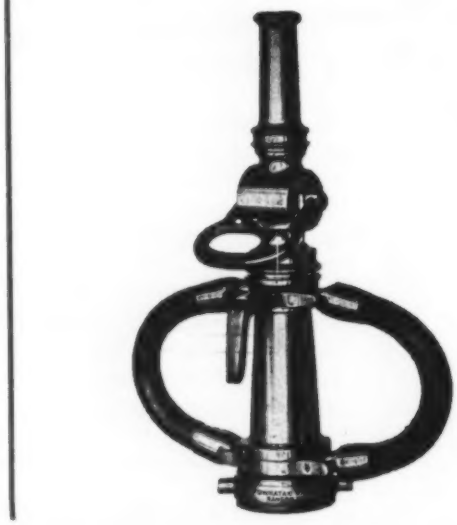
NEWARK 1 **NEW JERSEY**

Sales and Service in the Principal Cities of United States and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY

It will help if you will mention FIRE ENGINEERING *when writing advertisers*

Chief POWHATAN



PERFECT COMBINATION PLAY PIPE SIZE 2½ WITH PLAIN TIP

Built to stand hard handling.

This perfect combination is typical of all Powhatan Brass Goods—as hundreds of Fire Chiefs can attest the fact that they are built to "stand the gaff."

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

ing effect, over a flaming area up to a distance of 18 feet. It is said to form an insulating film on hot metal surfaces, helping guard against re-flash. It is claimed for All-Out that it forms no toxic gases; is a non-conductor of electricity; is non-abrasive; harmless to finished surfaces; is easily removed with a brush; has squeeze grip nozzle for positive control; its light weight permits easy carrying and use by men or women operators; the chemical will not deteriorate or cake; it is easily refilled (needs no special tools or equipment) and its 26 inches of ½-inch 1D pressure hose permits rapid maneuverability of dry chemical stream.

Horni Consolidates Operations

Andrew B. Crummy, Lawyer of Newark, New Jersey, Trustee in the reorganization of the Horni Signal Manufacturing Corporation of New York, announces the termination of the various locations formerly occupied by the Company in New York City and in Newark, New Jersey.

Mr. Crummy states that the entire operations of the company are now consolidated and concentrated in its newly acquired location at 421 West 54 Street, New York City. Here, the Company is engaged in the manufacture and sale of traffic control equipment, fire alarm systems and metal plate selonium rectifiers, known as Se-RON Rectifiers.

New Homelite Generator Bulletin

The completely new line of portable gasoline-engine-driven generators, now being produced by the Homelite Cor-Corporation, Port Chester, N. Y., is described in a new publication—Bulletin L-406. It gives details and pictures of the new models, showing applications. Generator sizes range from 500 watt to 5,000 watt AC or DC, 6 to 230 volt, 50 to 800 cycle. The weights of the complete units vary from 48 pounds for the smallest size to 142 pounds for the 5000 watt generator. The company is making actual on-the-job demonstrations of its new generators without obligation.

Ansul Appoints Canadian Agent

Ansul Chemical Company, Fire Extinguisher Division, Marinette, Wis., has appointed Levitt Safety Appliances Company, 1652 Younge Street, Toronto, Ontario, Canada, as a distributor of its line of dry chemical fire extinguishers for the provinces of Ontario and Quebec. Since the organization of this firm by Victor Levitt eleven years ago, they have been specializing in the sale of safety equipment in the industrial field.

Eagan Chairman of ADT Board

Joseph L. Egan was elected to the office of Chairman of the Board of Directors of American District Telegraph Company, N. J. effective April 1, 1946, to succeed Mr. A. N. Williams, who will continue as a Director of the Company.

New General Detroit Folder-File

The General Detroit Corp., 2272 E. Jefferson Ave., Detroit 7, Mich., is distributing a new File Reference Folder designed to fit standard file drawers

Your Confidence Is Appreciated... *and Justified!*

SINCE AHRENS-FOX return to full peacetime production of fire apparatus, fire chiefs and fire departments have repeatedly shown their confidence in Ahrens-Fox equipment.

How? By *purchasing* it—the best way by which confidence in any product can be expressed.

We deeply appreciate that confidence. And we assure you that it is fully justified.

During the war period, Ahrens-Fox devoted itself chiefly to essential work for the Armed Forces.

With this work successfully finished, Ahrens-Fox is devoting all its enlarged facilities—its increased capacity—its new, modern plant to the manufacture and servicing of fire apparatus.

AHRENS-FOX

Again, thank you for the confidence you are showing in us. Never in the long history of Ahrens-Fox has such confidence been more justified than it is today.

The new home of Ahrens-Fox with a greatly enlarged Service Department offering unequalled service facilities.

THE AHRENS-FOX FIRE ENGINE CORP. - CINCINNATI 12, OHIO

A PUMP FOR EVERY PURPOSE

THE ORIGINAL "LIFE SAVER"
MIDWESTERN'S
PROTECTIVE CLOTHING!

ORDER THE POPULAR
COMBINATION SUIT

Mackinaw Coat . . .

Midwestern's No. 101 Fireman's Mackinaw coat is highly serviceable and popular in large and small municipal departments throughout the country. Flexible elastic inner sleeve for wrist to keep out water, cold and sparks; adjustable collar strap, detachable wool lining, Midwestern Safety snaps, two outside pockets, 6-inch storm flap and many other fine Midwestern qualities.

Bunker Pants . . .

These Midwestern Bunker Pants are equipped with a removable wool lining which has safety snaps that cannot catch on anything. Sturdy construction, reinforced crotch for pole sliding. These pants, together with coat illustrated above, are Midwestern's outfit No. 101.

FIREMEN'S BOOTS

Regular Firemen's Boots, ¾ length, available now. Available soon, regular Firemen's Knee Boots. See your local Midwestern distributor for price and literature, or write the factory.

MIDWESTERN MFG. CO.
MACKINAW, ILL.

See your local Midwestern distributor for prices and literature, or write the factory.

and hold information pertaining to fire extinguishers. It is understood copies may be had without charge from Mr. C. J. Thoman, Director of Purchases at the above address, mentioning FIRE ENGINEERING.

Sherwood Brockwell, Jr., Joins Eureka Fire Hose

The Eureka Fire Hose Div. of the United States Rubber Co. announces the appointment of Sherwood Brockwell, Jr., as District Manager for North Carolina and Virginia. He succeeds Thomas O. Stewart, who has been retired on pension after 40 years of service with the company.

Sherwood Brockwell, Jr.

Mr. Brockwell recently got out of the Army with the rank of captain, after four years of service with the Ordnance Department. His last assignment was in Japan, where he was concerned with the duty of disposing of Japanese explosive materials and also acted as advisor in fire protection matters.

He was born in Raleigh, N. C., at the time his father, Sherwood Brockwell, veteran Fire Marshal of North Carolina, was Chief of Raleigh's Fire Department. A graduate of the North Carolina State College, with a degree in Architectural Enginering, he was employed by the state, and assisted in the formulation of the North Carolina Building Code.

Mr. Brockwell is well known in southern fire circles, having worked with his father in conducting fire colleges and drill schools in North Carolina, Virginia and Maryland.

Pyrene's Story of Air Foam

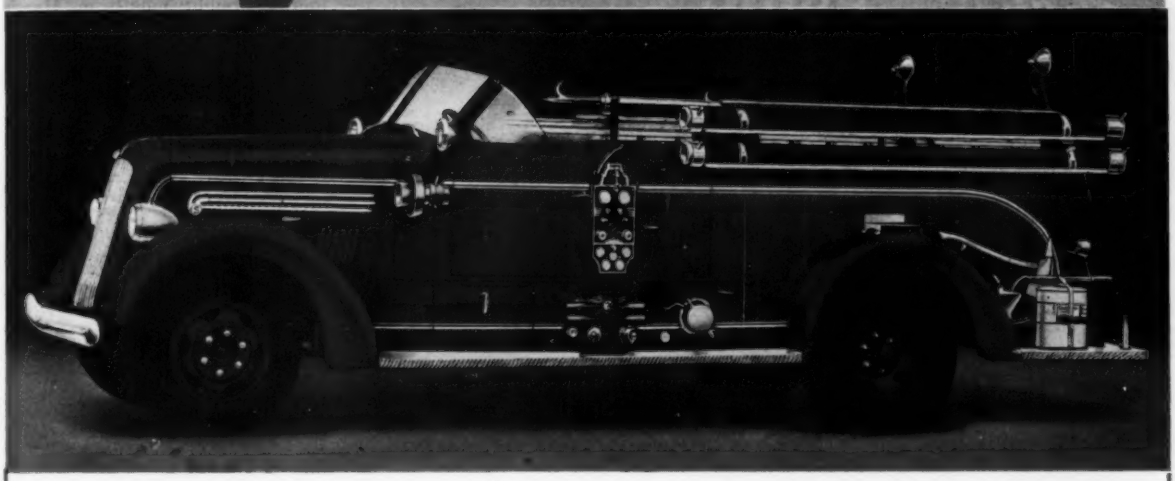
Pyrene Manufacturing Company, 560 Belmont Ave., Newark 8, N. J., has just released a new booklet entitled "Air Foam", which tells the story of the use of this extinguishing agent on burning liquids. It is plentifully illustrated and attractively printed. Included in the contents are data on the Findlay, O., large-scale oil fire tests.

American Fire Equipment Catalog

Catalog No. 15 of the American Fire Equipment Company, 45 Broad Street, Boston 9, Mass., lists the fire fighting and fire protection equipment—including hose—sold by the company. The 80 page book, which is wire-bound, contains much useful information in addition to descriptions and illustrations of the company's sales products.

THE NEW 1946 Seagrave

For Extraordinary Performance



If you want dependable, trouble-free fire service then it will pay you to get the new Seagrave. Seagrave again leads the field. These new models embody the very best of Seagrave engineering skill and mechanical ability.

The New 1946 Seagrave Pumpers are of the same high quality construction that has made Seagrave "The Greatest Name in Fire Apparatus." A Seagrave will give your department more in mechanical perfection and dependable performance for year after year.

New and simplified brakes—Full vision windshield—Dash instrument panel set on angle—New type pressure governor control—Pump panel at eye level—Seagrave motor in conventional position for greatest accessibility.

BIG ROOMY MODELS WITH PLENTY OF STORAGE SPACE AND COMFORTABLE CREW COMPARTMENT

ANOTHER ACHIEVEMENT FOR SEAGRAVE EXPERIENCED ENGINEERS and SKILLED MECHANICS

THE GREATEST NAME IN FIRE APPARATUS

THE SEAGRAVE CORPORATION
Columbus, Ohio

BICKLE-SEAGRAVE, LTD.
Woodstock, Ont.

GOODALL DOUBLE JACKET
Cotton Rubber Lined FIRE HOSE

Rugged construction, to withstand highest pressure surges, constant flexing and dragging over rough, abrasive surfaces. . . . Comparative lightness of weight, for easier handling. . . . A reputation for all-out reliability and safety, based on years of service to the Nation's firemen. Sizes 1½" to 2½", with or without Underwriters' Label.

OTHER GOODALL PRODUCTS for firefighting service include Chemical Engine or Booster Hose; Fire Engine Suction Hose; Underwriters' Unlined Linen Hose; Firemen's Coats and Boots; Fire Hose with "Fognozls" attached. (See back page of most issues of "Fire Engineering" for "Fognozl" details.)

Contact Our Nearest Branch or Main Office for Details of Goodall Products . . . "Engineered to the Job."

GOODALL

THE GOODALL-WHITEHEAD COMPANIES
Philadelphia - Trenton - New York - Chicago - Pittsburgh - Boston
Los Angeles - San Francisco - Seattle - Salt Lake City - Houston

Factory—Trenton, N. J. Established 1870

Miller President of Federal

It is announced by Sydney K. Schiff, Chairman of the Board of Directors of Federal Electric Company, Inc., of Chicago, that on March 9, 1946, the board elected Mr. Linwood A. Miller president of the company to succeed the late Charles Borland, and re-elected all other officers. For the past four years, Mr. Miller has been deputy regional director of the War Production Board and chairman of the Army Air Force Price Adjustment Board. Prior to entering the Government service he was president of The Willys-Overland Company, Toledo, Ohio.

March Fire Losses Up

Estimated fire losses in the United States again reached record heights for the fourth straight month in March, 1946, totalling $53,252,000, an increase of $12,373,000, or thirty per cent greater than March, 1945, it was announced by W. E. Mallalieu, general manager of the National Board of Fire Underwriters. March losses, which were three per cent above February's losses of $51,759,000, were the highest on record since the National Board began recording estimated monthly U. S. fire losses in 1929.

Losses during the twelve-month period ending March 31, 1946, were $482,950,000 as compared with $434,800,000 for the previous twelve-month period ending March 31, 1945, an increase of eleven per cent. The estimates are based on incurred losses reported to the National Board by member companies, plus an allowance for unreported and uninsured losses.

New York Plans F.D. Clinic

Plans for an out-patient clinic for members of the New York Fire Department and their families were announced early in April as the department's Honor Emergency Fund pledged $125,000 to buy equipment.

Fire Commissioner Frank J. Quayle has asked Mayor William O'Dwyer and Budget Director Thomas J. Patterson for an annual appropriation of $25,000 to defray salaries of the personnel operating the clinic, which will be located at Engine Company 30 at 278 Spring street, Manhattan.

"It is anticipated that in addition to the equipment installed there will be established a blood-donor station, also oxygen equipment, not only for the relief of the Fire Department members who suffer from smoke inhalation at fires, but likewise members of their families who are in need of such treatment," Commissioner Quayle said.

Dust Explosion at Alton, Ill.

Fire, following a grain dust explosion in the flour mill of the Standard-Tilton division of the Russell-Miller Milling Company of Minneapolis, Minn., at Alton, Ill., completely gutted the large plant, with an estimated loss of from $500,000 to $1,000,000.

The mill, which occupied half a city block, was built in 1902 after a fire had destroyed the original mill the previous year. It is said that adjoining grain elevators on the mill property escaped serious loss.

SPARK, cause undetermined, touched off this fire as the 3,700 gallon transport was being unloaded.

How would your community handle a hot one like this? Or tackle a sizzling crash fire at the local airport? Burning gasoline is sprayed far and wide igniting most everything it contacts. An extremely dangerous fire to fight!

The war technique of taming airplane crash fires presents the practical solution that requires no special training to execute.

A fog nozzle, water and MEARLFOAM-5, the blended, multi-protein foam liquid, make FOGFOAM that covers wide areas instantly.

* MEARLFOAM-5

Completely safe and non-corrosive—may be used with standard Mechanical Foam-Forming Equipment

Fogfoam speeds up rescue operations in crash fires involving airplanes, gasoline transports, automobiles, marine tankers...shields fire-fighters from the heat—cools and extinguishes *simultaneously*.

Fog nozzles are now available and every community should prepare itself—with MEARLFOAM-5—for quick extinguishment of gasoline and oil fires...with fullest protection to fire-fighting personnel.

• • •

TECHNICAL ASSISTANCE AVAILABLE
Bulletin on Request

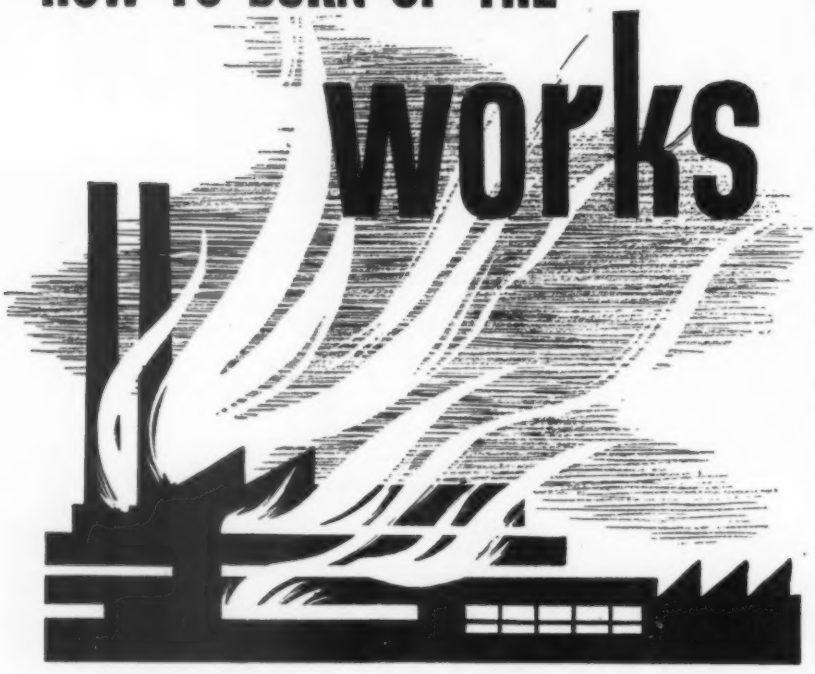
★ ★ MEARLFOAM-5, in pre-mixed solutions with hard or sea water, will not form any objectionable precipitate on long standing.

FOAM ON FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N.Y.

*TRADE MARK

HOW TO BURN UP THE Works



THROW WATER ON MOLTEN MAGNESIUM

Burning magnesium metal doused with water may cause a violent conflagration. Other fire extinguishing methods may be equally impotent. *But there is an effective way to control a magnesium fire.* Pyrene G1 Powder has been specially developed and prepared to extinguish fires in burning metals such as magnesium, sodium and potassium. Easily applied with either a shovel or machine.

or USE IMPROPER EXTINGUISHER
ON OIL AND GASOLINE FIRES

Pyrene Foam made at the nozzle of Pyrene Playpipe smothers fire in burning liquids. One man does the job with a hip-pack of air foam and just hydrant or salt water. Fast, safe, certain and most economical

or THROW WATER ON ELECTRICAL FIRES

Use a Pyrene Vaporizing Liquid extinguisher — a one-quart pump type to a one-gallon pressure type — depending upon size of fire. It's safe because it's a non-conductor.

STANDARDIZE ON PYRENE PROTECTION

Control of fire in all its phases has been Pyrene's business for almost 40 years. There are specific Pyrene Fire Extinguishers for different classes of fires. A Pyrene jobber will be glad to help you determine your fire hazards and advise best methods for protection from them.

Pyrene Manufacturing Company
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Affiliated with the C-O-Two Fire Equipment Co.

Classified Advertisements

Rates are inexpensive. "For Sale," "Proposal" and "Wanted" advertising. $5 per inch insertion (10% discount allowed for three or more consecutive insertions). FIRE ENGINEERING, *24 West 40th Street, New York 18, N. Y.*

WANTED

Fire Equipment Dealers to sell Morning Pride protected rubber firecoats, fire pants, fire mitts and fire suspenders.
Write today Morning Pride Mfg. Co. 1986 Home Ave., Dayton 7, Ohio.

CHIMNEY POWDER

No need to send men on the roof for chimney fires. Haa-Mor Soot Destroyer not only puts the fire out, it continues to work until it cleans the chimney, making it unnecessary to go back to another chimney fire. Put up in handy packages. Agents wanted. Harry S. Morgan, 52 Broad St., Johnson City, N. Y.

WANTED

Fire Protection Engineer with Engineering Degree, preferably World War II Veteran with organizational and fire-fighting experience. Age 30-40. Salary open. Address: Box 5, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

FOR SALE

Brass Indian Pumps Complete $24.00 ea. Prompt Shipment. Doray Fire Equipment Co., 1924 Valley Drive, Syracuse 7, New York.

FIRE AND POLICE BADGES

WANTED—Dealers or sideline salesman to sell Fire, Police, Bus, Taxi and Service Badges, on commission. Nickel, chrome or gold plated; lettered as desired. Write for Illustrated Folder "FE." NASSAU SALES CO. (Est. 1923) Flora Park, N. Y.

FIRE TRUCK FOR SALE

American LaFrance pump and motor in good condition, sealed bids accepted until May 27, 1946. Company reserves right to reject all bids. Can be inspected Water Witch Fire Co., Port Deposit, Md.

NOTICE TO BIDDERS

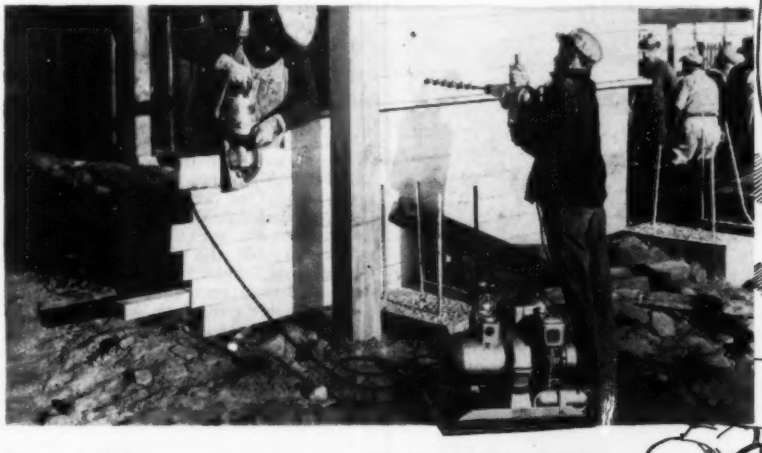
Separate bids will be accepted by the Village Trustees of the Village of Walden, N. Y., at the Office of the Village Clerk, in the Municipal Building, Walden, N. Y., until June 10, 1946.
On Four Fire Trucks:
1—1921 Mack Hook & Ladder Truck.
1—1921 Mack 500 G.P.M. Pumper.
1—1929 Brockway 350 G.P.M. Truck.
1—1929 Dodge Chemical Truck.
The Village of Walden reserves the right to reject any one or more, or all of the bids.
Richard E. Baird,
Village Clerk.
April 18, 1946.

Signalmen Plan Big Meeting

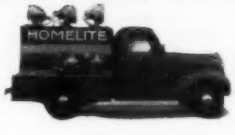
The 51st Annual Meeting of the International Municipal Signal Association, scheduled for Miami, Fla., Nov. 11 to 14, 1946, will have a comprehensive program covering all divisions of municipal signal work, including fire alarm and fire department communications, according to Irvin Shulsinger, secretary

Before Buying A Portable Pump or Generator...

Top picture shows high capacity of Homelite Portable Gasoline-Driven Self-Priming Centrifugal Pump. Bottom picture shows Homelite Portable Gasoline-Engine-Driven Generator operating electric drill and saw.



See What It Does ON THE JOB



Sure, we want you to write for our new bulletins... bulletins filled with the latest information on Homelite Portable Gasoline-Engine-Driven Pumps and Generators. But more than that, we want you to see these units in operation on the job... *your* job... any place, any time. After all, that's the only way to know how well a Homelite Pump pumps or how many tools and floodlights you can put into cost-saving operation with a handy Homelite Portable Generator. That is why we have so many Homelite men in the field... men who are trained and equipped to go out on your job, understand it thoroughly and show how Homelite equipment should work to your advantage.

So when writing for our new bulletins... L 501 on Pumps and L 406 on Generators specify that you also want a demonstration.

Homelite
CORPORATION
PORT CHESTER, NEW YORK
Portable Pumps, Generators, Blowers

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Persons in the News

W. W. Dean Honored

W. W. Dean, head of fire protection activities of the Office of the Chief of Engineers, War Department, Washington, D. C., recently received "Commendation for Exceptional Civilian Service," the Army's highest award, for his work in providing fire protection for Army establishments in this country and abroad.

The citation reads as follows:

"In recognition of his outstanding contribution to the Office of The Chief of Engineers in conserving manpower and vital war material. His sound judgment in the development of a comprehensive fire prevention organization and in the design and procurement of new and improved equipment resulted in drastic reductions in fire losses of American and allied military establishments in the continental United States and at overseas installations."

Selden Allen to Retire

Selden Allen, Chief of the Brookline, Mass., Fire Department retires in June, 1946. And so the fire service—not alone of Brookline, but of the nation—loses one of its most colorful, outstanding figures.

Perhaps "retires" is hardly the word for it: It is doubtful if Selden Allen can be separated for any length of time from the tumultous profession he has served for 48 years and more. Certainly, if by "retire" one means "being put out to pasture" to while away the remaining years in the sunshine, this can never apply to the man who has probably done more traveling, covered more miles, and preached the gospel of better fire fighting to more men than any other fire chief of our time. For everyone who knows Selden Allen knows there can be no relaxation for him.

Chief Selden R. Allen

Fire Chief Selden Allen may hang up his white hat, but if he has his way he'll just swap it for another municipal 'toppiece'—that of selectman. For the Chief hopes to keep up his public endeavors by having himself elected to Brookline's Board of selectmen. And every firefighter from Portland, Maine to Portland, Oregon, is hoping that he makes it.

Not only will this be his first venture in politics, but, as nearly everybody knows, as Chief of the Fire Department, Selden Allen has kept himself in the past about as far apart from politics as any fireman could! And it is an indication of the measure of the man that, through all the half-century of his municipal service, in spite of his oft-advocated insistence that fire fighting and politics don't mix, he has been universally popular with politicians

In the process of creating one of the foremost fire fighting organizations of his day, Chief Allen, like his department, has received numerous honors, including election to the highest fire service post in the country, president of the International Association of Fire Chiefs. He has been an officer in nearly all New England fire service organizations and it is doubtful if any other active fire officer holds so many "life" and "honorary" memberships in fire service groups as Chief Allen.—R.B.W.

In Service Fifty-Four Years

W. J. Parry, who has held an elective office in the department for 54 years, was elected treasurer of Luzerne, Pa., Fire Department at annual meeting. M. Stanley Johnson was reelected chief. Assistants named are Karl Hughes and Victor Naperski. Others elected: William P. Gunster, president, starting fourth term; George Novak, vice president; Kenneth Hottenstein, financial secretary; Herbert Hawke, secretary.

S. C. WINTERMUTE

FOG at 60 LBS.

THE Four WAY UNIVERSAL NOZZLE

1. FOG
2. SOLID STREAM
3. WATER CURTAIN
4. SOLID STREAM with WATER CURTAIN

THE UNIVERSAL NOZZLE OFFERS MULTIPLE FOG STREAM SELECTION FROM ONE CONTROL, PLUS A SOLID STREAM OF UNUSUAL REACH WITH SEPARATE SHUT OFF.

HIGH OR LOW VELOCITY FOG OR FULL PROTECTIVE WATER CURTAIN AVAILABLE BY A TURN OF THE ADJUSTMENT BARREL. SOLID STREAM CAN BE USED INDIVIDUALLY OR IN COMBINATION WITH FOG OR WATER CURTAIN.

SEND FOR DESCRIPTIVE CIRCULAR GIVING FULL DETAILS

MANUFACTURED AND DISTRIBUTED BY

L. N. CURTIS AND SONS

5812 COLLEGE AVE. • OAKLAND 11, CALIF.

Chief R. N. Hershey Retires

Chief R. N. Hershey retired on pension April 1, after twenty-seven years service in the Lake Worth, Fla., Fire Department. He was the oldest city employee in years of service having joined the department in 1913; he was named chief in 1915.

Chief R. N. Hershey

He was fire chief in the City of Hollywood during the years 1925-1929, bringing his total service to thirty-one years.

In 1924, Chief Hershey was elected and served as the first President of the Florida State Firemen's Association, and has been a member of the International Association of Fire Chiefs for the past twenty-five years.

Chief Harry Piggott Dead

Fire Chief Harry W. Piggott of the Rome, New York, Fire Department, died on March 24. He had been in ill health for several years.

Chief Piggott was appointed a member of the paid fire department on December 19, 1913. He was promoted to lieutenant on August 15, 1915, to captain on November 1, 1919 and to assistant chief on February 14, 1927.

He served as acting chief from October 1, 1932 to January 25, 1933, when he was appointed head of the department.

As chief engineer, Chief Piggott had charge of the fire department, the city electrical bureau, traffic signal lights and the extensive fire alarm system. The electrical department also maintains the police alarm system.

In the course of his more than thirty-two years in the department, Chief Piggott either fought as a fireman, an officer of the bureau or its chief every large conflagration in that time.

Long Island Firemen Elect Officers

At the annual meeting of the North Fork Volunteer Firemen's Association, the following officers were elected: President, Henry Tyler, Mattituck; First Vice President, John Kaelin, Southold; Second Vice President, Robert Doucett, Greenport; Secretary-Treasurer, Sidney Olmstead, Mattituck.

At the annual meeting of the Southold Fire Department the following officers were nominated by the department and

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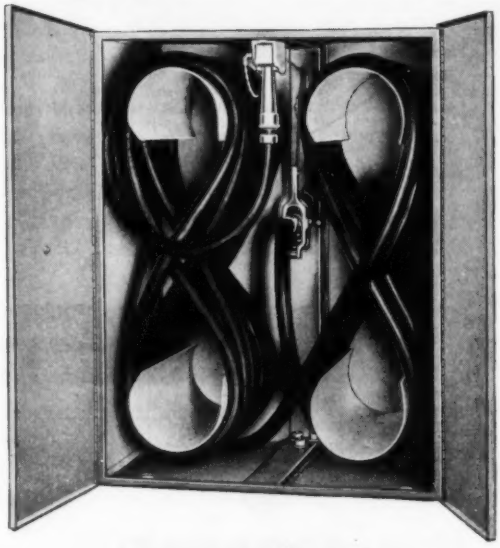
ESTABLISHED 1885

FOG FIRE FIGHTING ..... UNITS

for DEPENDABLE INDUSTRIAL FIRE CONTROL

Tested and proven for industries, warehouses, oil companies and handlers of paint products or solvents. Available water supply is the only requirement.



BOWSER MODEL 1033
ROTARY CABINET

. . . four-second fire fighting

Unit connects directly to a water line. The swing-joint mounting makes it self-aligning to the direction of the pull. 100 feet of 1 inch hose stows easily with figure 8 winding to avoid kinking. A valve actuating fixture holds the nozzle for instant use.

The fog nozzle supplies finely atomized water with medium pressure requirement. Rapid fire extinguishment with cooling and dilution of vapors gives maximum protection with little water damage.

BOWSER
Automatic Release Valve

The valve automatically releases to full capacity flow, instantly upon removing the nozzle from the cabinet.

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Use Coupon for Complete Details

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Gentlemen:

Send catalog sheet with more complete information on Models 1030 and 1033 FOG FIRE FIGHTING UNITS.

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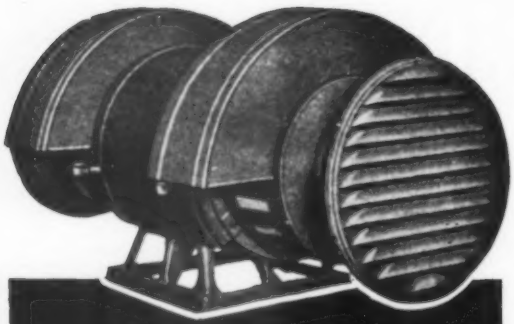
ADDRESS..... CITY.....



STERLING MODEL "M"

GENERAL ALARM SIREN

You Can Depend On It *ALWAYS*

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to instal and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M".

ALSO
manufacturers of a complete line of apparatus sirens.
Write for literature.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

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AMERICAN-MARSH PUMPS

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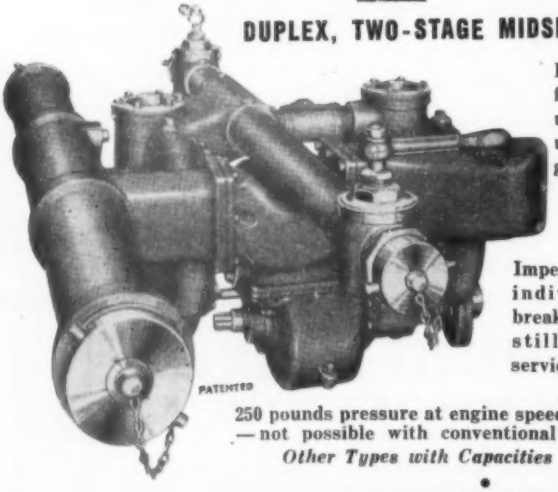
FIRE APPARATUS CENTRIFUGAL PUMPS

DUPLEX, TWO-STAGE MIDSHIP MOUNTED



High Pressure performance entirely unaffected when unit used to pump gritty water.

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Impellers mounted on individual shafts—breakdown of one pump still leaves one for service.

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PATENTED

250 pounds pressure at engine speed equal to 30 M.P.H. —not possible with conventional two-stage pumps.
Other Types with Capacities to 750 G.P.M.

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WRITE FOR BULLETIN 8731F

•

AMERICAN-MARSH PUMPS, INC., Battle Creek, Michigan

Pumps — and pumps only — since 1873

appointed by the commissioners for the ensuing year: Chief, William H. Rafford; First Assistant Engineer, Walter Williams; Second Assistant Engineer, John J. Berry; Secretary, Howard Terry and Treasurer, Carlisle Cochran

National Fire Waste Council Announces Winners

The city of Atlanta, Georgia, is winner of the grand award in the 1945 fire-waste contest, as announced today by the Chamber of Commerce of the United States, which with the National Fire Waste Council sponsors the contest.

More than 600 cities are enrolled in this annual year-round campaign of fire protection.

Top cities winning first awards in the six population classes are:

Class I (population of more than 500,000), Chicago, Illinois.

Class II (250,000 to 500,000 population), Atlanta, Georgia.

Class III (100,000 to 250,000), Wichita, Kansas.

Class IV (50,000 to 100,000), Schenectady, New York.

Class V (20,000 to 50,000), Marietta, Georgia.

Class VI (under 20,000 population), Fort Lauderdale, Florida.

North Carolina Chiefs Meet

Besides re-electing Chief W. H. Palmer, of Charlotte, president and Chief Frank D. Shaw, of Greensboro, vice-president of the North Carolina Association of Fire Chiefs, the organization at the close of its two-day meeting in Charlotte, N. C., April 9, passed a number of important resolutions.

The more important resolutions included one recommending that all school authorities refuse to approve or accept any plans for new school buildings incorporating therein shops or classrooms in which students test or experiment with internal combustion engines using gasoline or kindred products. The resolution proposes that all such shops or classrooms be built in separate buildings designed for and devoted to shop practices only, and located away from any other regular school building, and that all shops and classrooms now in existing school buildings be removed to separate school buildings as a safety precaution.

Another resolution recommended that the governing bodies of municipalities enact proper ordinances with sufficient penalties to stop the practice of parking any vehicles or container used in the transportation of gasoline or kindred products inside the corporate limits of cities and towns in North Carolina, except in special zones, properly designated and remote from business or residential property.

Nathan H. Yelton of Raleigh, N. C., director of State Employee Retirement System, explained to the fire chiefs the pension program as it pertains to firemen.

At the first day's session of the Fire Chiefs convention, Attorney General Harry McMullan of Raleigh, N. C., told the gathering that various communities and municipalities have adopted schemes which provide protection for limited areas in rural sections, while in other communities complicated

questions have arisen because of public demand that rural areas in North Carolina have fire protection.

"The advent of nuclear energy or the atomic bomb," Mr. McMullan said, "will doubtless cause many others to consider the advisability of having their homes away from congested areas and will increase the tendency for people to live outside incorporated limits.

"This problem has emphasized in recent times the question as to duties, responsibilities and authority of our fire fighting organizations to afford fire protection for structures and homes in the country."

George B. Hightower of Atlanta, Ga., manager of the Southeastern District, General Electric Company, discussed air conditioning and refrigeration. C. M. Griswold spoke briefly on the sprinkler system, and J. F. Morris, with a motion picture as an illustration, discussed fog nozzles in a fire department

D. G. SPENCER

Smoke Removed After Fire

Ridding a hotel building of smoke and noxious gases in three-quarters of an hour was the achievement of the Pierre, South Dakota, Fire Department, after a recent fire caused by an explosion in the basement of the building. The device used was a new type portable, self-powered ventilator, made by The Herman Nelson Corporation of Moline, Illinois.

According to Chief Charlie Zumwalt of the Pierre Fire Department, the ventilator was wheeled from floor to floor through all rooms and apartments. The smoke and fumes were forced out the windows and doors through a collapsible duct. As a result of using the unit, it is claimed there was little or no smoke loss to the building or its contents.

The outfit consists of a high capacity fan powered by a light-weight gasoline engine. Also furnished is a wire cage containing a collapsible 14-inch diameter by 16-foot length directional air duct of weather and heat resistant material.

Air delivery is adjustable up to 4,500 cubic feet per minute. The ventilator is mounted on a tubular metal frame, equipped with two rubber tired wheels. It weighs 87 pounds, complete with duct.

New York to Buy Apparatus

Bids have been received by the City of New York for the following apparatus: fifteen pumpers, one rescue truck and one metal aerial ladder. This aerial will be the first all-metal, power-operated unit to be installed in the New York Fire Department.

Correspondence

Hospital Protection

To the editor:

Less than 24 hours after the March issue of FIRE ENGINEERING was delivered in the Northeastern Pennsylvania area, Dr. George T. Baskett, Superintendent of Retreat Mental Hospital, made a public statement urging immediate action on the erection of a river bridge or a suitable highway to give adequate fire apparatus proper approach to the State institution.

FIRE strikes swiftly!

And has no respect for persons or properties; it comes with a devastating swiftness and makes preparedness a necessity.

In the interest of safety for your community, be prepared against loss by fire and put into action

QUAKER'S MODERN MUNICIPAL FIRE HOSE

with

EASY FOLD CONSTRUCTION

Write for Our Descriptive Folder

FIRE HOSE SUCTION HOSE

CHEMICAL HOSE FORESTRY HOSE

Reg. U. S. Pat. Off.

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HOWE Can Supply Any Body Style Desired.

HOWE FIRE APPARATUS CO. Established 1872 1402 West 22nd Street Anderson, Indiana

SERVICE . . .

The general public seldom realizes how much forethought, study and practice it takes to keep a conscientious fire fighter up-to-date in his profession, whether paid or volunteer.

It is that part of fire-fighting service unseen by the public . . . but its results are evident in many a fire stopped before it becomes a disaster.

Proof of the desire to broaden the value of their service reaches us every day in requests by fire-fighters for Hale Operating Manuals to replace copies worn out by constant study . . . or for additional copies to use for training purposes.

Part of Hale Service to users of Hale Pumps is to answer these requests promptly.

This service to users is all part of the same forethought which has gone into the design, research and production of Hale Fire Pumps . . . insuring their outstanding dependability, flexibility and efficiency.

Write today for latest information on Hale Fire Pumps . . . built in all standard capacities.

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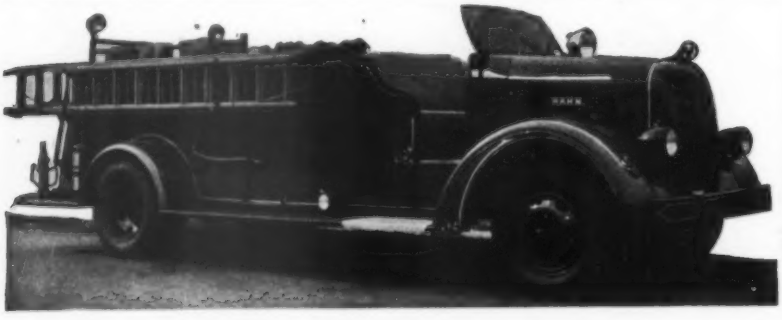

"HAHN" FIRE APPARATUS

SINCE 1907

FINEST IN THE WORLD * STREAM-LINED * BALANCED CHASSIS * AMPLY POWERED * VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

HAHN MOTORS, Inc.
HAMBURG, PA.

The superintendent, in his statement, made it clear that a bad fire at the $3,000,000 State institution would result in a tragedy because of the inability to move sufficient engine and truck companies into the hospital area.

Nestled along side the Susquehanna River, near Nanticoke, Pa., the rambling institution is "nearly remote from the outside world," except for a primitive type river ferry and a winding, dangerous, mountainous road. Neither of these alternative approaches is suitable for speedy response by fire apparatus, and the ferry would be taxed with a hose wagon, not to mention a large pumper or a ladder truck.

The hospital has an average population of 1,500 patients and employees, Dr. Baskett said. A well-drilled fire crew, comprising employes, functions at the institution, but it has only average equipment, including standard type extinguishers, fixed hose lines (interior and exterior) and accessories. It has no large volume equipment suitable to fight a fire of even first-alarm assignment proportions.

Fire officials in this area have repeatedly pointed to the fact that in the winter the ferry is unable to operate because of ice conditions and the landslide roadway is inaccessible because of ice or snow.

SHELDON C. WINTERMUTE
Wilkes-Barre, Pa.

Local Control of Public Institutions

To the editor:

I want to congratulate you upon your editorial in the current number of FIRE ENGINEERING, regarding nursing homes, etc.

There are a few points of interest of which we neighbors of the Tallman case* are aware and which I believe will be of general interest to the profession. . . .

First, the man who endeavored to aid in the extinguishment of the fire at Tallman just happened never to have been acquainted with extinguishers of any kind, and was totally at a loss to know how to operate the device available, which emphasizes the great need for more education and instruction on such appliances by all of us—manufacturers, salesmen, educators, et al.

Secondly, the appliance used was *not* of a type suitable for Class "A" fire conditions, especially one of such magnitude as the fire in question when it was attacked. As a result, the operator was in difficulties and "quit cold". He could make no headway against the fire. This indicates more education and training on the differences between such devices—more "when" and "when not" to use them.

Thirdly, as a result of this occurrence, there is a movement to enact some sort of state legislation in the form of regulatory measures covering such institutions which, as I interpret it, would almost totally inhibit any *local* regulation. One idea is to revive the old state fire marshal's office. This wasn't too bad, because under it the local fire chief was a deputy, but he *took* orders instead of giving them.

Another version is a county setup similar to that of Nassau County, which does not seem practicable for our local conditions.

* FIRE ENGINEERING for March, 1946, "Loss of Life Heavy at Fires for Aged."

Prior to the war our county Emergency & First Aid Council initiated an interpretation of the legislative "Enabling Act" whereby villages and townships might adopt the prepared code issued by any nationally recognized engineering authority (such as the National Board of Fire Underwriters) in short form "By Preference" and "By Title" whereby only the title-page would be published in the legal advertising instead of the entire text, verbatim, as now required by law.

This would seem to me the safest and sanest and least expensive method of securing *local* control.

WM. PAUL BABCOCK
Nyack, N. Y.

Guarding Convalescent Homes

To the editor:

In connection with your editorial in the March FIRE ENGINEERING, I would like to report that the City of Warwick, Rhode Island, has incorporated into its building laws, on the recommendation of the Board of Engineers of the Warwick Firemen's League, the suggested ordinance of the National Board of Fire Underwriters, Bulletin 226, on the regulation of Convalescent Homes, Etc., with such changes as were advisable to suit our local conditions.

In making these changes we have tied in the building inspector, the health department, the zoning board of review, with the fire department and find that this gives us an added advantage in securing needed corrections in these places.

It should also be noted that through the publicity and the great number of conferences in adopting this ordinance, the State Welfare Commission, which holds the power of licensing these homes, has started a policy of notification to all fire chiefs of all applications for permits to operate, before they will issue any license.

EVERETT G. SCOTT, Sec'y.
Board of Engineers,
Warwick Firemen's League.

Army Gas Masks

To the Editor:

I wish to thank you for your letter of the 15th, advising against the use of regulation army masks for the fire service.

With the help of your letter I have succeeded in having the Fire Company place the masks among their souvenirs and they will not be used for the fire service.

I have learned that the mail-order concern that advertised the masks stated in their advertisement in the newspaper that the masks were good for souvenirs and I hope that will be all they will be used for as a life is too valuable to risk on a three or four dollar mask."

JOHN H. RYAN,
P. O. Box, Sayre, Pa.

Editor's Note: The above is in reply to an inquiry addressed to FIRE ENGINEERING concerning the advisability of using civilian protection (OCD) gas masks in the fire service, on normal fire fighting operations.

The editors advise strongly against such use and it is gratifying to know that our advice has been taken to heart by persons in and close to the fire service.

THE "*Minute-man*" PUMP FOR *Fire* PROTECTION

Like the "minute-man" of revolutionary days the sturdy "Dual Fire Fighter" stands ready for instant action in case of need.

In the country, at summer resorts, farm homes and rural districts the water supply to fight fires is often inaccessible to the large truck pumper.

The little "Dual Fire Fighter" can be easily carried by two men to the source of water where it quickly relays water to the pumper or, if necessary, fights fires direct.

An ideal pump for dewatering basements after a fire as it is not damaged by dirty water.

The Gorman-Rupp "Dual Fighter" will:

- Throw 100 gallons at 70 pounds or 80 gallons at 80 pounds at the pump.
- Deliver 170 gallons at 30 pounds to the pumper for two 1½ inch lines.

Powered with a dependable four cycle engine. Surprisingly low price.

Complete information in our Bulletin FD-3.
Some territory open for live distributors.

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BOWMAN STREET · MANSFIELD, OHIO

A BADGE *to be proud of* NOW
more than ever BEFORE

Now—because of the Government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium—we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver and 14 karat gold.

Today—for just a little more, you get a sterling silver Braxmar Badge—without doubt the best badge you can buy anywhere.

The blue covered catalog is the latest published but write for our new price list, effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. A special Fire Dept. circular is now in preparation. Watch for your copy.

C. G. Braxmar Co., 242 W. 55th St., N. Y.
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BRAXMAR BADGES
Standard for over 60 years

THE NEW LOW PRICED
WHEAT
Rechargeable Spotlight

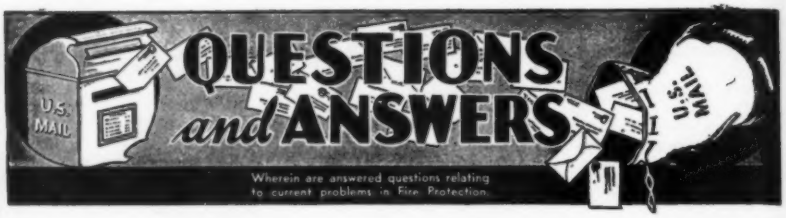
NOW AVAILABLE FROM STOCK—
ADAPTABLE TO ANY REDUCED BUDGET

FEATURES

- Less expensive operation than dry cells.
- Free use of hands. Light carries conveniently on shoulder strap.
- Positive "Non-spill" construction.
- Light can be focused and directed as desired.
- Weighs only 92 ozs. complete.
- Simple to charge and water. No need to take lamp apart.
- Low price and operating cost make Wheat adaptable to any reduced budget.

2,500 FOOT BEAM
25,000 CANDLE POWER
1,000 HOURS OPERATION

KOEHLER MFG. CO.
MARLBORO, MASSACHUSETTS



Engine Pressures on Deluge Set Layout

To the Editor:

Two engines are pumping into a deluge set equipped with a 1¼-inch nozzle tip; one engine is pumping into two lines of 2½-inch hose 200 feet long and the other engine is pumping into one line of 2½-inch hose 200 feet long. All three lines are siamesed into one deluge set. For a nozzle pressure of 80 pounds, what should the respective engine pressures be?

W. L. B.

Answer: Where you have two engines pumping into a deluge set, there can be any number of solutions to the problem, for each engine can deliver a different quantity of water to the deluge set, as long as the total discharge from both engines equals the discharge from the nozzle.

However, we'll make two assumptions. First, we'll assume that each engine gives the same discharge to the set; in the second, we'll assume that each line is to carry the same quantity of water.

Under the first assumption, the calculations will be as follows:

The discharge from a 1¼-inch nozzle at 80 pounds pressure is 813 gallons per minute.

Then each engine will discharge 407 gallons per minute approximately.

The parallel lines from the first engine will each discharge 204 gallons per minute, while the single line from the second engine will discharge 407 gallons per minute.

Friction loss in each of the parallel lines from the first engine carrying 204 gallons per minute will be as follows:

F. L. per 100 feet of 2½-inch hose = 2 x 2.04 x 2.04 + 2.04, or 10.36 pounds.

Friction loss in 200 feet is 2 x 10.36, or 20.72, or 21 pounds approximately.

Then the pressure at the first engine will be 80 + 21, or 101 pounds.

Calculating for the friction loss and the engine pressure on the single line, we proceed as follows:

Friction loss per 100 feet of 2½-inch hose carrying 407 gallons per minute is 2 x 4.07 x 4.07 + 4.07, or 37.2 pounds.

Friction loss in 200 feet will then be 2 x 37.2, or 74.4 pounds.

In this case the engine pressure will be 80 + 74.4, or 154.4 pounds.

Now solving the problem under the second assumption, that is where we assume that each line is carrying the same amount of water, we proceed as follows:

If each of the three lines carries an equal quantity of water, each one will be carrying 813 ÷ 3, or 271 gallons per minute, approximately.

The friction loss in 100 feet of 2½-inch hose carrying 271 gallons per minute is 2 x 2.71 x 2.71 + 2.71, or 17.4 pounds.

The friction loss in 200 feet will then be 2 x 17.4, or 34.8 pounds.

Engine pressure will be equal to the pressure at the deluge set plus 34.8, or 114.8 pounds.

This will be the pressure at each engine.

Correction in Nozzle Pressure

To the Editor:

On page 144 of the February issue, there is something wrong with the solution of the problem entitled "Larger Flow from Larger Line." From rough, round-number, short cut figuring. I reach something like 530 pounds pump pressure required for the 1½-inch line with 1-inch tip, as against 150 in the problem as printed. With only one 50-foot length it would take about 150 pounds as I figure it; with a 300-foot line the friction loss would be very heavy.

H. B. C.

Answer: You are correct. The nozzle pressure on the 1-inch nozzle attached to 1½-inch line of hose given in the problem in "Questions and Answers" should be 18 pounds rather than 51 pounds.

With 18 pounds nozzle pressure the discharge would be 118 gallons per minute. The friction loss per 100 feet of 1½-inch hose would then be 45.4 pounds, and for 300 feet, 136.2 pounds.

Add to this friction loss the nozzle pressure and you would have 154.2 pounds, which checks fairly closely with the engine pressure of 150 pounds.

Engine Pressure Calculations

To the Editor:

A 500-gallon pumper is pumping through a 1200-foot line of 2½-inch hose to a water thief from which are branched three lines as follows: Two 300-foot lines of 1½-inch hose equipped with ½-inch nozzles, and a 300-foot line of 2½-inch hose with a ⅞-inch nozzle.

What pump pressure would be required to maintain 50 pounds nozzle pressure on all three working lines?

A. F.

Answer: In the first place, the pressure at the ⅞-inch nozzle will not be the same as the pressure at the ½-inch nozzle. This is because we have a common pressure at the water thief and two different layouts to the nozzles.

However, we'll assume that the pressure at each of the ½-inch nozzles is 50 pounds, and then we will solve for the pressure at the ⅞-inch nozzle.

First we find the pressure at the thief.

Engine pressure is equal to nozzle pressure x(1 + KL), where K for 1½-inch hose and ½-inch nozzle, is .104; L is the number of 50-foot lengths of hose in the line and is 6.

Then E. P. = 50 x(1 + .104 x 6)
= 50 x 1.624
= 81.2 pounds

The discharge from a ½-inch nozzle at 50 pounds pressure is found as follows:

Discharge = 29.7 x ½ x ½ x $\sqrt{50}$
= 52.5 gallons per minute

These same calculations would apply to each of the two 300-foot lines of 1½-inch hose equipped with ½-inch nozzles.

Now with 81.2 pounds as engine pressure, we find the pressure at the ⅞-inch nozzle.

N. P. = E. P. ÷ (1.1 + KL)
E. P. = 81.2 pounds
K = .016
L = 6
N. P. = 81.2 ÷ (1.1 + .016 x 6)
= 81.2 ÷ 1.196
= 68 pounds approximately.

The discharge from a ⅞-inch nozzle at 68 pounds is 187.5 gallons per minute.

The total discharge from the three nozzles will then be 52.5 + 52.5 + 187.5, or 292.5 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 292.5 gallons per minute is 2 x 2.925 x 2.925 + 2.925, or 20 pounds approximately.

This is the friction loss in each 100-foot length of the 2½-inch line between the engine and the water thief.

The friction loss in 1200 feet of 2½-inch hose will be twelve times as much, or 12 x 20 = 240 pounds.

The engine pressure will thus be equal to the pressure at the water thief plus the friction loss of 240 pounds, or 81.2 + 240, or 321.2 pounds.

Vacuum Readings; Mushrooming

To the Editor:

Must the compound gauge of a pump show vacuum if everything is normal before the pump will receive water by atmospheric pressure? If the pump is 10 feet above water, will the gauge show 10 pounds or 10 feet on its reading?

Explain mushrooming in detail and also the best way to eliminate the danger of a back draft.

H. F. W.

Answer: 1. If an engine is taking suction, a vacuum must show on the intake before the pump will receive water.

2. If the pump is 10 feet above water, the gauge will show 10 inches of vacuum. The vacuum calibrations are usually indicated in inches of mercury. For all practical purposes, 1 inch of mercury is roughly equivalent to 1 foot of water. As the vacuum is normally indicated in inches of mercury, the readings on the gauge are in inches (of mercury) but for all practical purposes, as indicated above, they are equivalent to feet of water instead.

TRULY, LIFE SAVERS

Hundreds of people are lost each year because they fail to hear the commands. Unaided, the human voice is too weak to rise above the din and turmoil of an accident or a fire. But with the Guided Radio Portable Electric Megaphone* the voice is amplified 2500 times! Lives are saved, commands transmitted with clarity and obeyed with precision.

Guided Radio Portable Electric Megaphones are truly life savers—ready for every emergency. They're light in weight; equipped with internal storage batteries and charger to prevent battery failure.

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Write for Bulletin 11

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"Uniform Excellence in Uniforms for Every Purpose"

MORALE "INSURANCE"...

Smart, well-fitting uniforms can help insure departmental morale.

Fire protection officials in leading cities find it a wise "policy" to specify *better* uniforms by

WEINTRAUB BROTHERS & CO.
UNIFORM MANUFACTURERS
1321 Noble St. • Phila. 23, Pa.

Write today for data on latest styles and fabrics.

TANK TRUCK FIRES LIKE THESE ARE EASY FOR PARADISE WATER SPRAYS

Actual fire December 22, 1945,
21st and Capitol Avenue, Indianapolis, Indiana

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3165 S. PENNS STREET • INDIANAPOLIS 44, IND.

THE VERSATILE
Emergency
TOOL
PORTER
FIREMAN'S
CUTTER

Here is a high-speed, heavy duty "hot" line cutter—with important secondary uses.

Has Cohardite insulation moulded onto the handles — a safety measure against abrasion and puncture — each pair of handles thoroughly tested before shipment, to withstand 20,000 volts. Jaws easily cut ½" solid copper wire and open out to 1⅛" to admit heavily insulated wire. Its special search hook helps find and guide wires into the cutting jaws in smoke and darkness.

In fire fighting, wreckage clearance and rescue work, this tool is quick, efficient and dependable.

SEND FOR FREE DESCRIPTIVE FOLDER

H. K. PORTER, INC., Boston 49, Mass.

3. Mushrooming is caused by heat rising in a building and not having a passage through which it may reach the atmosphere. Air, on being heated, expands and therefore rises. It will rise to the highest point of a building and build up a pressure at that point. Although the pressure is very small, it is sufficient to force the heated air through crevices and through horizontal passageways. This phenomenon is known as mushrooming.

The best preventive for mushrooming is quick ventilation of the higher parts of a building.

As far as back draft is concerned, this can be prevented in the same manner, namely, ventilating at the high point first before opening up at the street. When the building is subsequently opened at the street, the hot gases rise and pass out through the building at the top and there is less chance of unburned gases, distilled off combustible materials, exploding upon ignition.

A Correction

A number of readers of the story of the disastrous fire in the Tinker Field Hangar, Oklahoma City on January 28, which appeared in the March issue of FIRE ENGINEERING, who were familiar with fire protection facilities at the Field, have called our attention to an inadvertent misstatement in the text, in which it was said that the hangar in question was sprinklered.

Actually, there were no automatic sprinklers in any of the four hangars in the group at the Field, although projects had been submitted for such protection by Army authorities.

The reference to sprinkler protection in the editorial text was drawn from accounts in the Oklahoma City press and not from report of the fire submitted by Chief G. R. McAlpine of the Oklahoma City Fire Department, who was in charge of fire-fighting operations.

Bureau of Standards Tests Imperviousness of "Mill" Construction to Fire

Further light on the ability of heavy timber or "mill" construction floors to withstand fire is disclosed as a result of tests conducted by the National Bureau of Standards.

The tests indicate, the Bureau states, that the limit of fire resistance of such floors, with the lower face exposed to fire, is determined either by failure under the normally carried working loads or by occurrence of flame or ignition of combustible materials on the upper side.

It was already well known that this type of floor withstands fire better than lighter, unprotected wood construction. The tests were made to determine how the heavy timber floor would behave when subjected to fires of the severity encountered in a standard furnace test and had for their primary objective the obtaining of useful information for use in connection with modern building codes.

In accordance with standard fire test requirements, the temperature on the furnace was raised to 1700 degrees F. within the first hour. Details of the tests follow:

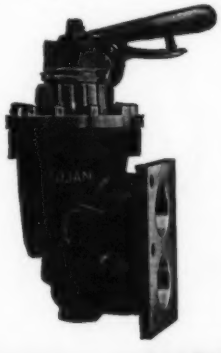
"With a 1-inch finish floor on top, the fire resistance of laminated floors of 4-

ROSS
RELIEF
VALVES

1" to 2½" female threads

MODERN PUMPERS

demand these rugged, modern relief valves. Their simplicity and responsive dependability make them a must. Made in sizes from 1 inch to 2½ inches with capacities up to 1600 g.p.m. and pressures up to 750 lbs. Write for descriptive literature describing the complete line of



TRAILER PUMPERS

Trailer pumpers require valves made especially for this type of work, such a valve is the ROSS Trailer Pump Relief Valve. Made in sizes from 1 inch to 2½ inches with pressure adjustments from 10 lbs. to 750 lbs. and capacities from 0 to 500 g.p.m. at 120 lbs. pressure.

ROSS VALVE MFG. CO
INCORPORATED
P.O. BOX 595, TROY, N.Y.

inch planks on edge averaged 45 minutes, with 6-inch planks a little over an hour, and with 8-inch planks about 1½-hours. With the structural portion of the floor of tongued and grooved plank of 3-inch nominal thickness laid flatwise, the fire resistance was near 45 minutes.

"Impregnation of the wood with fire-retarding chemicals increased the fire resistance of 4-inch floors about 15 minutes. A comparable increase was obtained with a heavy coating of fire-retarding compound on the lower surface."

Hotels at Cleveland

Below is given a list of the principal hotels at Cleveland, Ohio, where the International Association of Fire Chiefs is to hold its annual conference on July 23-26. The headquarters will be the Statler Hotel.

Name	Rooms	Rate
Allerton	600	$1.50 and up
Auditorium	300	2.00 " "
Belmont	200	1.75 " "
Bolton	300	2.50 " "
Carter House	600	2.75 " "
Cleveland	1,000	3.00 " "
Colonial	200	1.50 " "
Commodore	540	3.00 " "
Devon Hall	240	1.25 " "
Gillsy	300	1.25 " "
Haddam	300	1.50 " "
Hollenden	1,050	3.00 " "
Majestic	250	1.50 " "
New Amsterdam	300	2.00 " "
Olmsted	250	2.50 " "
Park Lane Villa	400	2.50 " "
Sovereign	350	2.50 " "
Statler	1,000	3.00 " "
Tudor Arms	300	2.50 " "
Westlake Hotel	400	2.50 " "

Greater New York Safety Conference Holds Fire Protection Sessions

Over 5,000 safety engineers and students of fire prevention and fire suppression registered at the 16th Annual Safety Conference and Exposition of the Greater New York Safety Council, April 9-12 inclusive, at the Pennsylvania Hotel, New York City.

Harold J. Seagrave of the Mine Safety Appliance Company was general chairman of the four-day conference, and the Fire Prevention and Protection Sessions, which were held on the afternoon of April 12, were directed by Chief Roi Woolley, Assistant Editor, FIRE ENGINEERING.

Speakers for the meetings were Harold J. Burke, Deputy Chief, New York Fire Department, former Captain, U.S.N.R.; William O'Connor, Director of Safety Education, New York University, and Captain Edward Curren and Chief Charles Vogel, Underwriters' Rating Board, Albany, N. Y.

N.Y.F.D. Fully Unionized

For the first time in the history of the New York Fire Department, every member of every grade and rank can carry a union card. This step is the outcome of efforts of the Uniformed Fire Officers Association (organization of which was announced in the April issue of FIRE ENGINEERING) and the Uniformed Firemen's Association of New York. Both associations are affiliated with the American Federation of Labor.

YOUR PUMPER CAN DO THIS

WITH THE
DERBYSHIRE
ACCEL-O-RATE
JET PUMP
BOOSTER

Yes, your own pumper can lift water over 100 feet or draft it horizontally from a source more than 200 feet away—if you have an Accel-O-Rate.

Think what this would mean to YOU, when steep banks, mud, walls, or high bridges keep you from getting your pumper close enough to a water source to use ordinary suction.

Everyone who sees the Accel-O-Rate is amazed at what it will do, how simple and handy it is. It weighs only 18 lbs., has no moving parts to wear out or get out of order.

See your fire equipment dealer today or write to us direct for complete details.

THE DERBYSHIRE ACCEL-O-RATE JET PUMP BOOSTER gives you HORIZONTAL REACH-300 FT. VERTICAL LIFT-100 FT.

100 FT.

JET PUMP DIVISION

DERBYSHIRE MACHINE & TOOL CO.
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MANHATTAN FIRE HOSE

Radio-Active Treated, Mildew-Proof . . . Rot-Proof . . . Freeze-Proof . . . and with FLEXLASTICS* for longer Service life. Every length Pressure-Tested and Flat-Folding for easier, safer handling.

*The term FLEXLASTICS is an exclusive MANHATTAN trade mark. Only MANHATTAN can make FLEXLASTICS.

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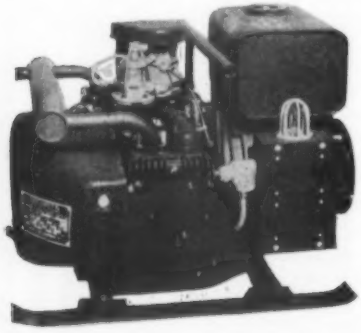

Designed for Fire Department Service. 25% reserve or better. Magnesium and Chrome Nickel Casting. 4 cycle, Automatic Voltage Regulator, Dependable, Economical, Compact design, Lightweight, and sturdy construction.

From 600 to 10,000 Watt A.C. & D.C. Generator. Projectors and cords.

Write for literature.

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Grosse Pointe Park Receives Honorable Mention in Fire Prevention Contest

The village of Grosse Pointe Park, Mich., received honorable mention in the Fire Prevention Week Contest sponsored by the National Boad of Fire Underwriters and the National Fire Protection Association. It was the first time the village had participated.

The report states that the fire department responded to 248 alarms and 32 false alarms. The record fire loss for 1945 was $9,275.00, or a decrease of $5,-881.00 under 1944.

Edward L. Rector is Chief and Elmer F. Ulrich is Fire Commissioner.

Echoes of the War

By Roi B. Woolley

Munitions Blast Test Suit

A $150,000 damage suit growing out of the death of a merchant seaman in the Port Chicago munitions explosion in July, 1944, was filed on Nov. 9 last by Harry W. Nathan, of Sacramento as administrator of the estate of his son, Harry E. Nathan, one of the 433 victims of the blast. The Government on Dec. 17 consented to be sued, considering the case as a test. Judge Louis E. Goodman, San Francisco, ruled in April that the suit must be defended by the Federal Government by April 15 or the claim must be paid.

* * *

Fire in MacArthur's Building

A night fire in the sub-basement of the Dai Ichi building, Gen. Douglas MacArthur's headquarters, in March, resulted in minor fire damage and the flooding of the basement.

Discovered about 9:00 P. M., the fire apparently originated among pipes in a well leading to the seventh floor. It was not extinguished until 2:00 A. M.

* * *

Hot Off the News Ticker

A fire of undetermined origin destroyed over $1,000,000 of U. S. Army Engineering equipment at a depot near Leghorn, Italy. . . . Vast brush fires swept New Zealand destroying millions of feet of badly needed native timber. . . . In the Philippines, five Filipino civilian laborers were killed and three Filipinos and one United States soldier were injured when a grass fire exploded land mines and set fire to buildings at Las Pinas ammunition depot south of Manila. . . . In Shanghai, fire destroyed a United States Army warehouse containing $40,000 worth of gasoline. . . . In England a young mother and her 17-months-old son were seriously injured when their automobile was struck by a two-ton bomb that bounced off a Royal Air Force trailer. The bomb did not explode . . . In St. Johns, N. B., a hangar and four United States Army planes were destroyed by fire at Torbay Airport with reported damage of $1,-500,000. . . . In Carmarthen, Wales, Councilmen voted to vary the note of the town fire siren from what the citizen's committee said was a screech, to make it sound like a bird call! Tweet! . . . In Manila, a school pupil was killed and twenty-four were injured in April when a grenade with which they were playing exploded. . . . Also

keep WATER DAMAGE DOWN Use Shuredry GREEN-BAK

• SALVAGE COVERS •

Pour on the water — merchandise covered with Shuredry is protected. Flexible, easy-to-handle Shuredry Green-bak Salvage Covers are water-proofed by the exclusive Fulton dry treatment—always soft and pliant even in zero weather. No cracking or sweating when folded for storage.

Tested and passed by the National Board of Fire Underwriters and by Factory Mutuals Fire Insurance Association.

Set a new record for low fire losses. Order Shuredry Green-bak Salvage Covers now from the factory nearest you. Immediate shipment.

FULTON BAG & COTTON MILLS
Manufacturers since 1870
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HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO

SOME WORDS FOOL YOU

like

RAISE (to erect) **RAZE** (to destroy)

BUT

WOOSTER BRASS always means the BEST in fire equipment supplies.

THE WOOSTER BRASS CO.
WOOSTER, OHIO

When you specify products bearing the TRUMPET trademark, you can SAVE and BANK on SAFETY.

in Manila, nine persons were injured and the newly-established Coast Guard Geodetic Survey headquarters was destroyed in a spectacular fire of undetermined origin. A newspaper and two blocks of apartments and warehouses in the Binondo district were burned out. . . . In Seoul, Korea, the 7th Division gave a party to ten Red Cross girls who lost all their personal belongings, including diamond rings, a pet teddy bear and set of false teeth, in a fire that swept their wooden residence. . . . A fire believed to have been caused by acetylene torch sparks, started in an abandoned 4-foot grain elevator at the Black Tom dock of the Lehigh Valley Railroad in Jersey City, but was quickly controlled. The dock was the scene of the disastrous Black Tom explosion during World War I. . . . In Sausalito, Calif., Navy fireboats extinguished a spectacular fire aboard the 10,000 ton attack transport Cullman after a three-hour battle. . . . Off Miami, Fla., Coast Guard planes and a seagoing tug played hide and seek with a derelict ammunition barge loaded with 134 tons of bombs and depth charges.

* * *

OCD Liquidation Speeded

Liquidation of surplus property, including fire-fighting equipment, of the former Office of Civilian Defense is expected to be speeded under a new disposal procedure announced by War Assets Administration.

Effective in April, the W.A.A. took full control of disposals and plans to complete liquidation by June 30, through regional offices. The property concentrated in urban areas will be offered in this order:

1. Federal priority claimants.
2. The community to which property was charged by OCD in war time will then be eligible to purchase any property it needs.
3. Remaining property will be offered to either priority holders and commercial users at "site" rates.

Property located in rural areas and small towns will be offered to the community to which it was originally charged by OCD on a "negotiated price" basis. All sales will be F.O.B. site.

If a community does not wish to make an offer for OCD property, a neighboring community may do so. Two or more communities may join in purchasing material. Communities may resell to other communities, volunteer fire departments or to governmental users buying for their own use and not for resale.

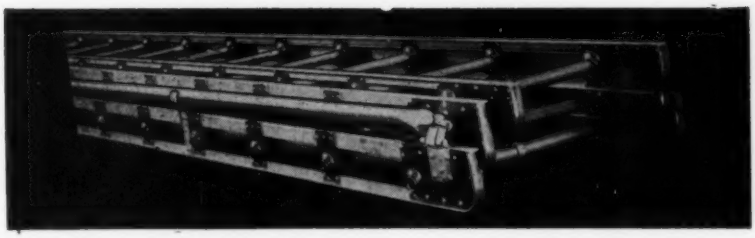
* * *

Fire-Fighters at Bikini

Fire-fighting and salvage vessels, and ships carrying most of the atom bomb experiment's personnel, will be located eighteen to twenty miles distant from the point in Bikini Atoll where the bombs will be detonated as part of the Navy's atom bomb tests, it is disclosed.

Prominent among the Naval fire-fighters who came out of the municipal fire forces is Lieutenant Carl Dreesen, former battalion chief of the New York Fire Department. Evidently anticipating an extended visit to that area, the Lieutenant has requested that his copies of FIRE ENGINEERING be sent him "Care Operations Cross Roads"—the "operations title" of the exploit.

The Army and Navy do not propose



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STRONG-LIGHTWEIGHT Aluminum Ladders

★ The three section, aluminum, heavy duty extension ladder illustrated is type 3 EL. Its unusual strength combined with remarkable light weight makes it one of the most popular fire ladders ever designed. Because of these characteristics . . .

. . . a 65 foot ladder of this type can easily be raised by four men and a supervisor — an impossible feat with ladders not made of aluminum.

FOR GREATER SAFETY AND EASE OF HANDLING

The locks operate automatically at any desired point during ladder extension. The rope and flexible cable are arranged for simultaneous automatic extension of both flies.

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Write for information on standard sizes and aluminum ladders built to specifications

Aluminum Ladder Company

200 Carbis Street
Worthington, Pennsylvania

Chief Bridges of Kent, Wash., Writes About His CHAMPION HI-LIFT SUCTION BOOSTER

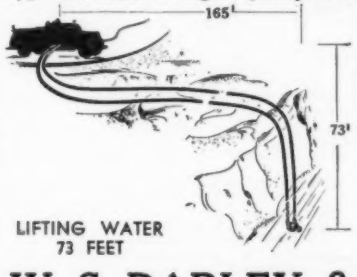
THE CITY OF KENT
WASHINGTON

April 11, 1946

W. S. Darley & Co.
Chicago 12, Illinois
Gentlemen:

Your letter asking if there are any questions in regard to the Champion Hi-Lift Suction Booster, nothing to ask about it, it works perfect in fact so perfect that the first fire we used it on after having it only two weeks, we received a check from the Kent Airport for saving the rest of the buildings, for $100.00 dollars. National Fire Protection Assn. will run a sketch of the fire and also the lay I made with the Champion Hi-Lift and if it was not for the Hi-Lift the whole north end of the Airport would have gone up in smoke. You don't know how long I have been looking for a rig like your Hi-Lift. So many buildings we have lost in the country along our rivers and lakes where they were out of reach of our suction.

We pumped out of a R.Road Ditch and could only get our pump as close as fifty feet from the water. I said after we had water coming out of a 2½" line with a large mystery nozzle on the end, "who said the Hi-Lift wouldn't work." The people around the airport couldn't understand what I could do with a ditch full of water to put out a fire. But it soon proved what it could do when 150 lbs. at the nozzle was blasting hell out of that burning bunch of planes and the buildings.



LIFTING WATER
73 FEET

Yours truly,

Chas. Bridges, Fire Chief

W. S. DARLEY & CO., CHICAGO 12

Fight Fire with...

StrangleAIR FOAM

and FIRE-SNUFFER NOZZLES

A coating of StrangleAIR lasts for hours on any surface, horizontal or vertical. No fire can withstand its smothering effect. StrangleAIR is clean, white, non-toxic and will not injure paint, woodwork, furniture or carpet. Eliminates flashbacks and prevents formation of noxious fumes.

FIRE-SNUFFER NOZZLES

are specially designed for fast, effective action with foam. Manufactured in standard sizes from 2½ GPM to 250 GPM and available through fire appliance supply houses.

For full information, request Illustrated Bulletin 551

StrangleAIR FOAM

AMERICAN DIE & TOOL CO., INC.

EAST READING, PA.

The element of time is of first importance in the successful treatment of burns. If a burn is treated within 15 minutes after it occurs, the probability of blister formation is reduced to a minimum. But if time is wasted before proper treatment is started, serious complications and infection may follow.

When using Gebauer's TANNIC SPRAY in the treatment of burns, the factors involving time-loss are eliminated. This preparation is a stable solution of tannic acid ready for immediate use. Packaged in a sturdy amber bottle having an automatic dispensing cap, which permits the projection of the solution in the form of a fine jet stream. Upon application the solvent evaporates rapidly, covering the burn with an evenly applied, dry and flexible film of tannic acid.

Gebauer's TANNIC SPRAY is a practical *first* first-aid treatment for first, second, and small area third degree burns. Write for literature.

THE GEBAUER CHEMICAL CO.
9410 St. Catherine Ave. • Cleveland 4, Ohio

to gamble with the safety of the 35,000 men participating in the forthcoming bomb tests in the far Pacific. Safety plans include locating the ships and personnel in areas at least twenty miles from the point of the blasts. The areas are code-named after automobiles, trucks and tractors. Thus the fire-fighting units will be in sectors known as "Hupmobile, Hudson, Graham, Franklin, Ford" and so on. Ships will have their engines turning over, bow on to the point of detonation, to be able to ride out waves. Instructions on how personnel shall conduct themselves have been issued and fire-fighting personnel has already received its orders.

* * *

Hirohito Loses Fire Engines

American-made fire engines, seized by the Japanese in Hong Kong and presented to Emperor Hirohito as special fire-fighting equipment for the imperial palace grounds, are being returned to the British government. The machines were found in nearly perfect condition by a British representative.

* * *

No Defense Against U. S. Gas?

Secretary of War Patterson has disclosed that the United States had developed a war gas that "would have made the Japanese military maks useless."

Patterson also said that sixty-six Japanese cities with an aggregate population of more than 20,000,000 were crippled by fires from U. S. incendiaries.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of April, 1946.

Month Ending April 30, 1946

Williamstown, Ont.—Grist mall, genl. office, post office and two dwellings, destroyed.
Sault Ste. Marie, Mich.—Store-apt. house and business bldg., destroyed.
Little Rock, Ark.—Whse. of Little Rock Broom Works destroyed.
St. Dominique de Bagot, Que.—Parish church, damaged. Lightning.
Toronto, Ont.—Factory of W. A. Sheaffer Pen Co. damaged.
West Boylston, Mass. — Taylor & Doe brass foundry, destroyed. Oil burner overflowed.
Ottawa, Ohio—Bldg. occupied by Utility Automotive Equip. Co., bowling alleys of Victor Unterbrink, destroyed; also dwelling and service station of Martin Walker, Presybyterian Church and Kohls Food Locker Service bldg., damaged.
Stoughton, Wis.—Skaalen Sunset Home for the Aged, three miles east, damaged.
Adams, Mass.—Adams Laundry damaged. Lightning.
Fort Worth, Tex.—Fort Worth Fixture Co. damaged.
Winnipeg, Man.—Grain elevator of Federal Grain Ltd. in northwest Winnipeg damaged. Spontaneous ignition.
Alabaster, Mich.—Three bldgs. of Brown Fish Co., Saginaw Bay, Iosco-Arenac County line, destroyed.
McGraw, N. Y.—Vesta Corset Co. plt. destroyed.
Oneonta, N. Y.—Bldg. housing clothing store, business offices and apts. on Main street, destroyed.
Darien, Conn.—Dwelling of Eugene S. Brooks destroyed.
Wilmington, Dela.—Black Cat Recreation Centre destroyed.
Indianapolis, Ind.—Former North Beach Hotel, vacant bldg., restaurant, barber shop and four dwellings, Bass Lake, destroyed.
Lafayette, La.—Evangeline Live Stock Exchange destroyed.
Passaic, N. J.—School No. 7 destroyed.
Little Valley, N. Y.—Court House, Cattaraugus County, damaged.
Coeburn, Va.—Offices and commissary of Banner Fuel Co., Route 10, Cranes Nest, destroyed.

BODY-GUARD
BUNKER SUITS
FOR COMFORT & PROTECTION

We have been supplying FIREMEN'S CLOTHING for over 25 years.

Any fireman can have a catalog by writing—

BODY-GUARD MANUFACTURING CO,
ST JOSEPH MISSOURI

"The Superior"
A MODERN *and* PROVEN
LIFE NET

The SUPERIOR LIFE SAVING NET is stronger than any other, because of the tested breaking strength of 1,800 lbs. of each individual rope.

The direct pull shock absorber system eliminates all friction and its greater resiliency provides for a safer, easier landing.

Made of Chrome Molybdenum steel, the frame may easily be folded for storage within a few seconds.

For the utmost in LIFE SAVING VALUE . . . "SPECIFY SUPERIOR".

For ECONOMY, have your old net converted into a "SUPERIOR".

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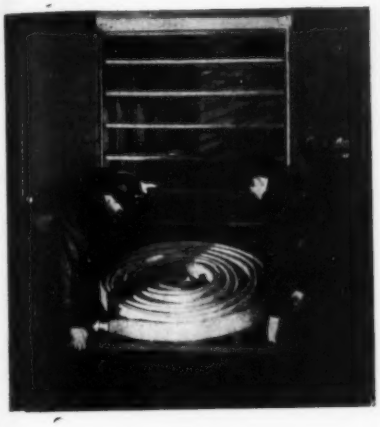
William Moeller
Designer Consultant

SUPERIOR FIRE EQUIPMENT CORP.
235 E. 42nd St. New York, N. Y.

Better

HOSE DRYING



with

CIRCUL-AIR

THE AIR-CONDITIONING

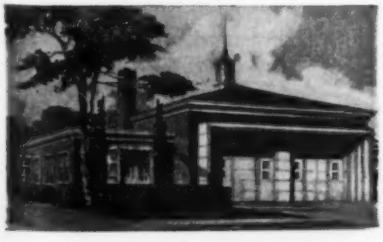
FIRE HOSE DRYER

Chiefs and firemen prefer this modern ELECTRO-MECHANICAL DRYER because it: (1) does a better job in a fraction of the time; (2) saves most of the hard work; (?) takes up so little floor space; (4) is ideal for hose storage; (5) lessens need for large hose reserves; (6) dries clothing as well as hose.

CIRCUL-AIR is ideal for *fire stations of any size* . . . indeed many larger cities have re-ordered for additional houses after initial installations have proved it the fastest, easiest and most economical drying medium.

Improves

FIRE STATION DESIGN



In eliminating the unsightly hose tower and cumbersome rack and the "dead" space they involve your architect can plan a really attractive station of functional design. The thousands of dollars saved in construction costs could provide a lot of other needed equipment. DON'T give your modern fire dept. an old-fashioned home.

ASK A CHIEF WHO HAS ONE

Or Write for Descriptive Booklet

The CIRCUL-*AIR* CORP.

6339 East Palmer Avenue

DETROIT 11 MICHIGAN

Seattle, Wash.—Jersey Cram Baking Co. damaged. Oil burner back-fired.
Tacoma, Wash.—Pacific Highway Motor Transport whse. destroyed.
Huntsville, Ont.—Riverview tourist hotel, Baysville, damaged.
Indianapolis, Ind.—Associated Distributors, sales room and stock destroyed.
Hearst, Ont.—Garage bldg. of J. A. Vaillancourt and adj. bldgs. damaged.
Pocatello, Ida.—Sweigart packing plt. destroyed.
Bloomfield, N. J.—Kent Foundry Co. damaged.
Wapakoneta, Ohio — Rendering plt. of G. A. Wintzer & Son, one mile north, destroyed.
Portland, Ore.—Inman-Poulsen Lumber Co. damaged. Blast.
Allentown, Pa.—Rialto theatre bldg., Keystone Furniture Co. and other bldgs. destroyed.
Drumbo, Ont.—Drumbo Continuation School damaged.
Los Angeles, Cal.—Superior Macaroni Co. destroyed.
Orlando, Fla.—Farmers Co-operative Exchange, heart of adj. Pinecastle, destroyed.
Hampton, Ia.—Four business bldgs. comprising Harriman block, occupied by Iowa Public Service Co.; Bockelman tailor shop, Economy Feed Store and Grosche auto body shop. Rubbish pile.
Cambridge, Mass.—Comb. office bldg. and bldg. owned by Lee Hall, Jr., whse. of Stretton Transportation Co., destroyed. Sparks from acetylene torch.
Caruthersville, Mo.—A. J. Dillman & Son, automobile parts store, damaged.
Pittsburgh, Pa.—Main bldg. of Clark Lumber Co. damaged.
St. Mary's, Pa.—Corbett Cabinet Co. destroyed.
La Grange, Ore.—Epling Distributing bldg. destroyed.
Greensburg, Pa.—Blacksmith and machine shops of Westmoreland Coal Co., Shafton, destroyed.
Monessen, Pa.—Monessen High School bldg. destroyed and adj. Junior High School bldg. damaged.
Toronto, Ont.—Canadian Natl. Exhibition grandstand damaged.
Sepewaing, Mich.—Lloyd A. Milliken furniture store destroyed.
Roslyn, N. Y.—Thirty-two room mansion of Samuel Rubel, millionaire brewery magnate, damaged.
Toledo, Ohio—Goodwill Industries production bldg. damaged.
Sharpsburg, Pa.—Fort Pitt Brewery bottling plt. damaged.
Jackson, Tenn.—Farmers Gin Co. bldg. destroyed.
Barre Center, N. Y.—Whse., factory and office of Orleans County Canning Co. destroyed.
Philadelphia, Pa.—Music Village Cafe damaged.
Scarboro, Ont.—E. Milner Co. damaged.
Los Angeles, Cal.—Ideal Heating Corp. plt. and adj. lamp factory, destroyed.
Denver, Colo.—Factory of Red Comet Fire Extinguisher Co. destroyed.
Hammond, Ind.—Coffee roasting plt. and whse. of Grand Union Tea Co. destroyed. Gas flame of coffee roaster.
Des Moines, Ia.—Clubhouse of Des Moines Golf and Country Club, west of city limits, destroyed.
Syracuse, N. Y.—Trucking freight terminal of Goss Trucking Co. destroyed.
Chicago, Ill.—Bldg. occupied by Standard Fruit Processing Co. and Many Blanc & Co., liquor wholesalers, damaged.
Huntington, Ind.—Maco Corp., mfrs. of kitchen utensils, damaged.
Cambridge, Md.—No. 1 shed and electric welding shop of mold-loft layout of Cambridge Shipbuilders Co., damaged.
Butte, Mont.—Old high school bldg. destroyed.
Bennington, Vt.—Uptown theatre block, occupied by United Shoe Store Co., Betty's Dress and Hat shop, candy store, theatre and apts., destroyed.
Seattle, Wash.—Northwest Steel Rolling Mills damaged. Molten steel explosion.
Jenkins, Ky.—Theatre bldg. occupied by hotel, drug store, dental office and engineering offices of Chesapeake & Ohio Railway Co., destroyed; Consolidation Coal Co.'s bldg. damaged.
Huntington, Ind.—Maco Corp. plt. damaged.
Little Rock, Ark.—Fire destroyed Chapman Dewey Motor Co. and Chapman Dewey Implement Co., Marked Tree, Ark.
Lake View, Ark.—Lake View Cooperative Store and stock on Lake View Farm Security Administration project, destroyed.
Fayetteville, N. C.—Planing mill of Rankin Lumber Co. destroyed.
Chicago, Ill.—Interior of Ericcson Elementary School destroyed; The Keith Co. yard, adj. Lord & Bushnell Lumber offices and living quarters damaged.
Lohrville, Ia.—Business bldg. and adj. storage bldg. of Priebe & Son Creamery, lock plt. and hatchery destroyed.
Boston, Mass.—Post theatre and four barracks of Army reservation, Fort Ruckman, Nahant, destroyed. Grass fire.
Fitchburg, Mass.—Grossman Lumber Co. plt. damaged.
St. Louis, Mo.—Bldg. occupied by McCutcheon Bros. and Quality Co., printing ink mfrs.; Lloyd Scruggs Co., electric motor mfrs.;

THE NEW

SAW-GUN

SHOULD BE STANDARD

ON ALL

FIRE-FIGHTING EQUIPMENT

Here's Why..!

The Saw-Gun is a portable power-saw that will quickly cut into all metals, wood and other materials. Quickly attaches to any electric or air drill, and may also be propelled by a flexible shaft. Insert ordinary hack-saw blade for cutting.

Firemen equipped with this handy tool can now get at the fire quickly. Can cut openings into obstructions regardless of their material. Cuts rapidly through heavy gauge steel. No need to waste precious time removing steel gratings . . . cut them out of the way with this amazing portable tool. Does away with slow, cumbersome, dangerous gas cutting torches, together with their long lines of hose and heavy tanks.

Progressive fire-chiefs who know the importance of getting at a fire *fast*—who want a quicker means of getting to entrapped persons, will add the Saw-Gun as standard equipment.

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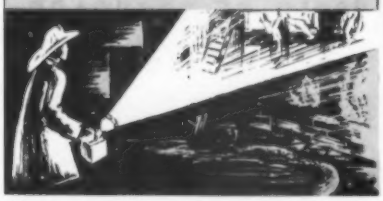
Mid-States

EQUIPMENT CORPORATION

Saw-Gun Division

2419 S. Michigan Ave., Chicago 16, Ill.

GIVE YOUR CHIEF AN
"ON-THE-JOB"
MASTER-LIGHT



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Easy to handle . . . center of gravity always under hand. One mile penetrating range. Twenty hours without recharging, or longer if used intermittently. Finest TRUE parabolic, triple silver plated reflector 6 in. diameter. Lights bright even under water-wet conditions. 3-way toggle switch. "Master-Built" construction throughout. Weight 11 lbs. Complete with battery $45. Smoke and fog penetrating lens, $1.00 additional. Order Type WS Master-Light today!

Gentlemen: ☐ Please send me one Type WS Master-Light, complete $45.00. ☐ Please send me Emergency Lighting Catalog.
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By CARPENTER MFG. CO.
200 Master-Light Bldg., Boston 45, Mass.

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SINCE 1836

HELMETS
In Leather, Aluminum or "Flint-Flex"

TURN-OUT CLOTHING . . . . . BADGES
SHIRTS CAPS BELTS
RUBBER COATS RUBBER BOOTS

LOOSE-LEAF
FIRE RECORD BOOKS
DEPARTMENT RECORD FORMS

Write for Catalog 310

CAIRNS & BROTHER
444 LAFAYETTE STREET, NEW YORK 3

Sandal-Craft, Ltd., sandal makers; and whse. of Petite Shoe Co. damaged.

Tonawanda, N. Y.—Maintenance hangar of Mutual Aviation, Inc., destroyed.

Paulding, Ohio—Dwelling of Gerald McGaw destroyed; whse. of Betty Zane Corn Products Co., destroyed. Oil stove explosion.

Portsmouth, Ohio—Gallagher Drug Co. destroyed. Defective wiring.

Warren, Ohio—Whse. of Seminole Pigment Co. destroyed.

Philadelphia, Pa.—Business bldg. occupied by Quaker City Auction Co., Star Mfg. Co., makers of knit goods and Irwin Adams Co., bathing suit dealers, destroyed.

Georgetown, Ont.—Three boxcars and freight shed of Canadian Natl. Railway and coal yards of J. B. MacKenzie & Son damaged.

Caruthers, Cal.—Caruthers Grammar School auditorium destroyed. Defective wiring.

Chicago, Ill.—Uptown Players Theatre, destroyed.

Hamburg, Ia.—Bldg. and whse. of Otoe Food Products Co. destroyed.

Missoula, Mont.—Whse. of Milwaukee Railway Co. damaged.

McEwen, Tenn.—McEwen High and Elementary School destroyed.

Pontiac, Mich.—Dwelling of J. K. Denton destroyed.

Fairmont, Minn.—Bldg. occupied by Fairmont Novelty Co., Philco radio shop, Frasier & Thiede plumbing shop and Wilson Produce Co., destroyed.

Bay Shore, N. Y.—A block of five two-story bldgs. and two adj. bungalows in the business section of this Long Island village was leveled by fire.

Vallejo, Cal.—Production plt. of Vallejo Times-Herald, damaged.

Hamilton, Ont.—Plant of Cub Aircraft Corp. damaged. Spark caused explosion in paint fumes.

Hartford, Conn.—Brightman Auto Parts Co. bldg. damaged.

Clarksville, Tenn.—Whse. of F. P. Gracey & Bros., Inc., destroyed.

Evansville, Ind.—Main mill bldg. of Maley-Wertz Lumber Co. destroyed.

Fairbanks, Alaska—Northern Hotel destroyed; Pioneer Grill, detroyed; Liquor store of Don Cook destroyed; Allies Room Liquor Store destroyed.

Inglewood, Cal.—Forrest Furniture Mfg. Co. plant, finishing section of plt., including paints, finishing materials and furniture being finished, destroyed.

Detroit, Mich.—Lumber yd. of L. E. Pearson Lumber Co. destroyed. Austin Construction Co. destroyed.

Oklahoma City, Okla.—Southland Cotton Oil Co. warehouse destroyed.

Goldendale, Wash.—J. Neils Lumber Co. damaged; round house machine shop, blacksmith shop, numerous equipment destroyed.

Key West, Fla.—Overseas Transportation Co.'s garage destroyed.

Moscow, Ida.—Moscow Fire Brick & Clay Products Co. destroyed.

Grand Haven, Mich.—Barn of E. J. Davis and Gene Hill Fishing House, destroyed. Defective wiring.

Kalamazoo, Mich.—American Aggregates Corp. plt., sand and gravel co., destroyed.

Nashville, Tenn.—"Shadow Hills" dwelling of Virginia Hale, destroyed.

Galveston, Tex.—800-foot pier, Southern Pacific docks, destroyed.

Edmonton, Alta.—Business block, south, damaged.

Chatham, Ont.—Home of the Friendless destroyed. Faulty wiring.

Evansville, Ind.—Mill bldg. of Maley-Wertz Lumber Co. destroyed.

Brookline, Mass.—Brandon Hall, an apt. bldg., destroyed.

Holland, Mich.—Holland Hitch Co. plt. damaged.

Morrilton, Ark.—Plt. of Morrilton Packing Co. destroyed.

Bonners Ferry, Ida.—King Lumber Co. destroyed.

Chicago, Ill.—Immaculate Conception Church social center and Worth Community Church, Worth Township, destroyed.

Marshalltown, Ida.—Four bldgs. occupied by Marshalltown Syrup Co., Blue Ribbon distributors, Mahaska Beverage Co., Gamble Stores, and small lumber yd. of Wilson Coal & Lumber Co. destroyed.

Waterloo, Ida.—Whse. of Herrick Refrigerator Co. damaged.

St. Louis, Mo.—Bldg. occupied by offices and whse. of Cook Paint & Varnish Co. damaged.

Devon, Pa.—Stables on "Tarleton" estate of Geogre C. Stout, destroyed.

Mifflin, Pa.—Mifflin Mills Carpet Factory and adj. restaurant of Walter Harling, destroyed.

De Funiak Springs, Fla.—Two bldgs., one of them owned by Sidney J. Catts, destroyed. Several other bldgs. damaged. Defective refrigerator motor.

Reading, Pa.—Bldg., Mt. Penn, occupied by Martin Rug Co. and Reading Rug Co., destroyed.

State College, Miss.—Laundry bldg. at Mississippi State College, destroyed.

New Westminster, B. C.—Nelson Bros. Fisheries Plt. destroyed. Also destroyed 13,000 cases herring, 300 fishnets.

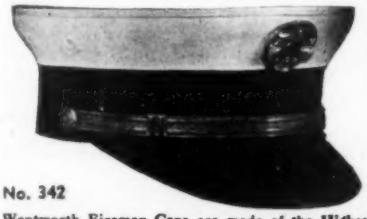
JANESVILLE QUALITY
TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and
THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

NOW AVAILABLE!
We can now supply old type ¾ Felt-lined Firemen's Boots.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

WENTWORTH
FIREMAN'S UNIFORM CAPS
Union Made Prompt Delivery



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Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Best Skilled Union Craftsmen in all the New and Standard styles. Our 50 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

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Write direct for latest circular and prices or see your local dealer.

WENTWORTH-FORMAN CO., INC.
21-23 Edinboro St., Boston 11, Mass.
Manufacturers
Fireman Cap Specialists for Over 50 Years

Convention Dates

May 27-28 — MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual meeting, Hotel Lassen, Wichita, Kans. Secretary-Treasurer, Chief Ray Tiller, Fire Headquarters, Waterloo, Iowa.

June 3-5—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. Annual meeting, Elmira, N. Y. Secretary-Treasurer, Chief Henry F. Drake, Clinton Corners, N. Y.

June 3-7—NATIONAL FIRE PROTECTION ASSOCIATION. Annual meeting. Hotel Statler, Boston, Mass. General Manager, Percy Bugbee, 60 Batterymarch Street, Boston, Mass.

June 6-8—NORTHERN N. Y. VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Potsdam, N. Y. Registration Chairman, Martin E. Sullivan, c/o Potsdam Fire Department.

June 18-21—ILLINOIS FIRE COLLEGE. Annual meeting. University of Illinois, Champaign-Urbana, Ill. Secretary, Chief R. W. Alsip, Fire Headquarters, Champaign, Ill.

June 19—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Ashland, Ohio. For reservations, contact Ashland Fire Company, Ashland, Ohio.

June 19-21—MARYLAND STATE FIREMEN'S ASSOCIATION. Annual meeting, Frederick, Md. Secretary, B. R. Benson, 3rd, Towson, Md.

June 20-22—HUDSON VALLEY VOLUNTEER FIRE ASSOCIATION. Annual meeting, Beacon, N. Y. Secretary, Chief Henry F. Drake, Clinton Corners, N. Y.

June 21-23 — BERKS COUNTY FIREMEN'S ASSOCIATION TRAINING FORUM. Annual meeting, Wyomissing, Pa. Secretary, Clarence H. Beck, 423 Pine Street, Reading, Pa.

June 24-26 — EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Hotel Pennsylvania, New York, N. Y. Secretary, Chief Charles E. Clark, Box 271, Wayne, Pa.

June 25-27—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meetings. Wentworth-by-the-Sea, Portsmouth, N. H. Secretary, Chief John W. O'Hearn, 22 Mt. Auburn Street, Watertown, Mass.

June 25-27—MICHIGAN FIRE COLLEGE. Annual meeting, Ann Arbor, Mich. Director, Dr. C. A. Fisher, Extension Service, University of Michigan, Ann Arbor, Mich.

June 26—CENTRAL WESTERN FIREMEN'S ASSOCIATION. Annual meeting, Covington, Ohio. Registrations, Roger C. O'Donnell, Chief, Covington, Ohio, Fire Department.

June 26-27 — NORTHERN CENTRAL NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, East Rochester, N. Y. Secretary, William L. Reid, Jr., East Rochester, N. Y.

July 18-20 — CENTRAL NEW YORK FIREMEN'S ASSOCIATION. Annual meeting, Auburn, N. Y. President, Archie Spencer, Sidney, N. Y.

July 23-24—WESTERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Fredonia, N. Y. Secretary, James H. Surridge, Industry, N. Y.

July 23-25—KENTUCKY FIREMEN'S ASSOCIATION. Annual meeting, Paducah, Ky. Secretary, Captain V. A. Beam, 3504 Garland Avenue, Louisville 11, Ky.

July 23-26—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Cleveland, Ohio. Secretary, Chief Daniel B. Tierney, 8 Robbins Road, Arlington 74, Mass.

Aug. 5-9 — PENNSYLVANIA FIRE SCHOOL. Annual meeting, Lewiston, Pa. Director, Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Harrisburg, Pa.

Aug. 6-8—INDIANA FIREMEN'S ASSOCIATION. Annual meeting, Fort Wayne, Ind. Secretary, Dee L. Corbin, Fire Headquarters, Bedford, Ind.

Aug. 12-14—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. Annual meeting, Neenah, Wis. Secretary, Arthur J. Rahn, Chief of Fire Department, Two Rivers, Wis.

Aug. 27-30 — DOMINION ASSOCIATION OF FIRE CHIEFS, Annual meeting, Timmins, Ont. Secretary, Chief Allan H. Clark, Lakefield, Ont.

Sept. 9-13—INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS. Annual meeting, Toledo, Ohio. Secretary-Tresurer, George J. Richardson, A. F. of L. Building, Washington, D. C.

Oct. 15-17—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Quincy, Ill. Secretary, Chief Roy Alsip, Fire Headquarters, Champaign, Ill.

Nov. 11-14—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting. Miami, Fla. Secretary, Irvin Shulsinger, 8 East 41st Street, New York 17, N. Y.

"CENTRAL" HAS A RECORD FOR DEPENDABILITY

Central 500-Gallon Pumper mounted on 1½-ton chassis.

WE BUILD A TRUCK FOR EVERY COMMUNITY, LARGE OR SMALL. WRITE US FOR DESCRIPTIVE LITERATURE

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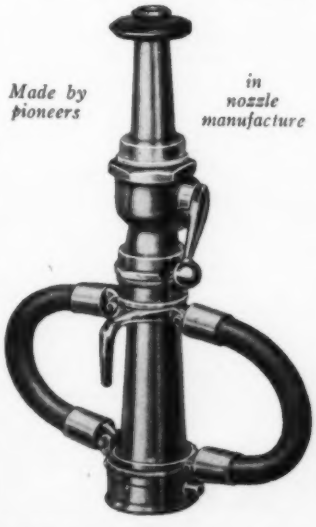
3929-31 LACLEDE AVENUE ST. LOUIS, MO.
"Everything for Fire Fighting"

"All American Choice"

Made by pioneers *in nozzle manufacture*



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F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
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AND WATERWORKS ACCESSORIES

M & H products, including pipe line accessories, are well known for high quality of material and expert workmanship. They are made according to standard specifications and have been used for many years throughout the country. Write for Catalog No. 34.

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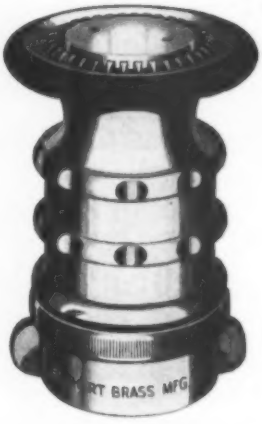
—

Under Control in 10 minutes



THIS IS IT!

This is the ELKHART J-200 JUMBO Mystery Nozzle—a fog nozzle capable of discharging up to 475 gallons per minute at 125 pounds nozzle pressure. Its huge output provides an enormous blanket or wall of solid fog. Write for further information, specifications and prices.

PEORIA FIRE DEPARTMENT
HEADQUARTERS:
LIBERTY AND MADISON STREETS
TELEPHONES 4-3131 - 32 - 33
PEORIA, ILLINOIS

FIRE MARSHAL	ASST. FIRE MARSHALS
SYDNEY L. ULRICH	CHARLES BIEGLER
SECRETARY	RUDOLPH KNEER
STEPHEN B. DORICH	WILLIAM H. ZILLION

The Elkhart Brass Mfg. Co.,
Elkhart, Indiana.

Gentlemen:

A few months ago we purchased four of your J-200 "Mystery" Nozzles.

On January 17th we received an alarm from the Black Hawk Motor Transit Company. Upon our arrival we found their garage completely involved in fire; it was a building 65 feet wide and 165 feet long. We laid hand lines into the front door and also into the back door.

Then Capt. Ray Miller of Engine No. 1 hooked up his 1000-gallon pumper in the parking area adjoining the garage, and from this pumper he stretched a line into the side door of the garage. He put on a J-200 Mystery Nozzle and went to work.

In 10 minutes we had this fire under control and were ordering lines shut down. I might mention that the wood char in the roof and truss spans was very heavy but the fire never got out through the roof.

This nozzle certainly did a grand job for us, and it is borne out by the enclosed letter from the Black Hawk Motor Transit Co.

Sincerely yours

(Signed) Sidney L. Ulrich

Black Hawk Motor Transit Co.
Bus Transportation • Fast Motor Express Charter Service
401 Hamilton Blvd., Peoria 2, Illinois

Mr. Sid Ulrich, Chief
Peoria Fire Department
Peoria, Illinois

Dear Mr. Ulrich:

After looking over our building this morning, I can't help but be grateful for the efficient way the men of your department handled the fire at our garage yesterday.

While our damage is great, we are certain that had not one department gone to the center of the building and controlled the fire at its original source, there would have been no building standing at 306 North Jefferson this morning.

Less efficient fire departments could very well have started at both ends of the building and worked themselves to the center. Had this been done, I am sure the building would have been lost.

I trust that you will pass on to your men the gratitude of the Black Hawk Motor Transit Company for their splendid work in controlling a very dangerous fire.

Yours very truly,

(Signed) Robert Gates

Robert Gates
General Manager

ELKHART BRASS MFG. CO. Inc.
ELKHART, INDIANA

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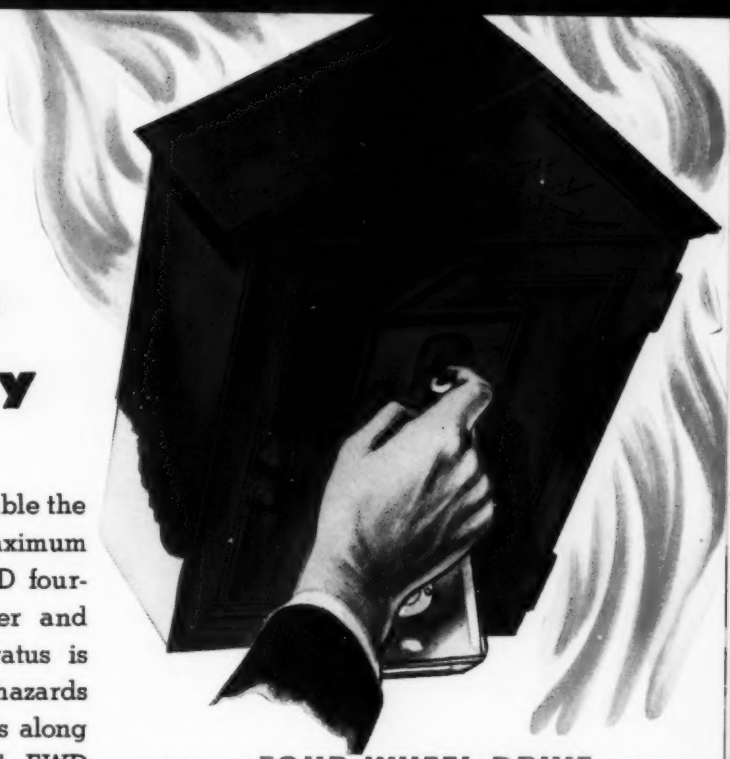
FWDs are DOUBLY SURE of getting to fires Fast, with Safety



Just as surely as doubling 2=4, there is double the assurance of making every fire run with maximum speed and safety when you operate FWD four-wheel-drive Fire Apparatus. With power and traction on all four wheels, FWD apparatus is substantially safer and surer on the road; hazards to firemen and dangers to users of streets along the course of a run are materially reduced. FWD engineers will be glad to consult with fire chiefs and commissioners, and offer recommendations to meet your community's needs. Write for bulletin.

THE FOUR WHEEL DRIVE AUTO COMPANY
CLINTONVILLE, WISCONSIN
Canadian Factory: KITCHENER, ONTARIO

FOUR-WHEEL-DRIVE

A "Plus" that Pays in Many Ways!

For 36 years, owners have said: "FWD—the Best Truck Built!"

THE FASTER · SAFER FOUR-WHEEL-DRIVE *Fire Apparatus*

FOG NOZZLE COMPANY

1520 EAST SLAUSON AVENUE, LOS ANGELES 11, CAL.

Fire extinguishment, through the application of man-made Fog, is destined to become the **standard** for fire extinguishment and control, based upon the availability of water as an extinguishing agent, economy of extinguishing agent, safety to personnel through the cooling action of water, has no equal in fire control and safety.

FOG NOZZLE COMPANY

enjoys the unique distinction of being one of the few manufacturers who were fortunate enough to employ a principle in fire control which, due to engineering research, has given those who require fire protection, economy of operation, personnel protection, MAXIMUM EFFICIENCY, using an extinguishing agent, **water** which is available wherever fire protection is required, as water is fundamental to life.

ADVERTISING

FOGNOZLS are the result of a principle properly applied and delivered to the user, so that when the emergency arises technical information and training is not required for maximum efficiency and protection. Advertising is necessary to acquaint the user with the developments and improvements associated with aggressive living and living standards. Fog Nozzle Company, being the **original inventors and patentees of man-made Fog**, invite the attention of any and all who may require fire protection, that the life of the user may not be interrupted by fire and its often disastrous results.

A FOGNOZL is manufactured for every type of USER need, **fire department use, industrial use and home use** and also for humidifying and stabilizing temperature control in the factory or in the home. Our slogan is

"PRIDE BASED UPON PERFORMANCE"

It is our desire to personalize each fire hazard and we offer our services without obligation in suggesting the type of equipment best suited to the hazards of each user. We have, in addition, standard literature which we will gladly furnish upon request.

FOG NOZZLE COMPANY

1520 EAST SLAUSON AVENUE — LOS ANGELES 11, CALIF.

FOG NOZZLE OF CANADA, LTD., MONTREAL, CANADA

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